

APPENDIX D
Responses to Comments
On The Environmental Assessment of May 31, 2002

On May 31, 2002, the Environmental Assessment for the Desert Branch Project Area was issued for review and comment. A legal notice of its availability was published in The Inter-Mountain, the paper of record for the Monongahela National Forest, and in the Nicholas Chronicle, of Summersville, WV. Copies of the EA were mailed to those who had responded during the scoping period and those who requested a copy. A copy of the EA has been posted on the Monongahela National Forest website since June, 2002. No decision was issued based on the May 31 EA for the Desert Branch Project Area. The EA has been modified, and is being reissued for review.

The following comments were received during the 30 day comment period for the EA of May 31, 2002, based upon the EA, and the tentative selection of Alternative 1, the modified proposed action.

Ron Swearingen
Richwood, WV
June 17, 2002

1. Commenter asked about a public hearing for the project.

Response: A public hearing was not held for this project. Public input was requested during the project through a mailing to adjacent landowners and other interested parties. Also included in the scoping process was a notice in the May 10, 2001 issue of the Nicholas Chronicle. In addition, community outreach included describing the proposed project at Richwood Chamber of Commerce meetings, the last time on April 15, 2002. That meeting was described in the April 25, 2002 issue of the Nicholas Chronicle. Public comment was requested during a 30-day public comment period that lasted June 1, 2002 through July 1, 2002. The commenter was sent a copy of the EA and invited to submit comments during the 30-day comment period.

2. Commenter is concerned about trucking through Weber City. He understands that the Handle Factory Hollow Road may be widened (on private land) to accommodate larger trucks.

Response: Truck traffic is addressed on pages 147-148 and 152-153 of the EA. Timber harvesting has occurred on private lands in the Handle Factory Hollow area; therefore historically some truck traffic has occurred on WV 39/17, although not at the scale or concentration that is likely to occur in the Desert Branch sale.

Although the Forest Service is not likely to be directly involved in widening of WV 39/55, there is a chance that this may occur as a result of a need for the work as perceived by the state, no matter what size trucks are used.

3. He is concerned about the maintenance of the roads and wants them to be kept in good repair. He asked who has maintenance responsibility on the roads.

Response: Maintenance of WV 39/17 is a state responsibility. The Forest Service has contacted state highway personnel to ensure that the state is aware of the size of the project so the highway department will be aware of the need for additional attention to these roads. Although the state has maintenance responsibility, the Forest Service may place some additional stone on the Handle Factory Hollow Road prior to or during hauling on this road. This type of work is occasionally done by parties hauling on rural public roads, in order to facilitate hauling.

4. He suggested that the hauling should go out the other way, by connecting roads to FR 730.

Response: Most of the proposed timber harvest is in the western end of the Opportunity Area and would not be accessible by FR 730 without construction/reconstruction of approximately 2.3 miles of connector road between roads FR 946 and FR 730. This would create a connector road, which would encourage gate breaching and other illegal road use. The West Virginia Department of Natural Resources does not recommend connecting roads in MP 6.1 areas for the reason stated above. See Glasscock Comment #6 of July 16, 1999 in Disposition of Issues from Scoping.

Hauling over FR 730 was considered in Alternative 2, for the timber to be harvested in the eastern portion of the area. It was not considered for the timber to be removed close to the existing, open, state road, because of the additional costs that would have been involved in over 10 miles of hauling on Forest Roads, compared to reaching the public road system in less than 3 miles.

The difference in cost for Road Prehaul Maintenance for Alternative 2 compared with that of the other alternatives is shown in Table 17 on page 158 of the EA. Had the roads been connected, the cost difference would have been even greater. Thus alternatives with the connector road were not analyzed in detail; see Alternatives Considered but not Carried Through Analysis(EA, pp. 39-40).

5. He is concerned about potential impacts on flooding.

Response: Effects on watersheds are addressed in the Watersheds section of the Environmental Effects Chapter (pp. 69-87 of the EA). Specifically, peak stormflows and flooding are addressed on page 78. The July 2001 and November 2003 flooding is described on pages 72 and 73. Although small measurable increases in stormflow, and possibly peak stormflows, during the growing season are possible in some of the small drainages such as Handle Factory Hollow, no significant adverse effects are expected. Any such increases would be attenuated in the downstream channel system. No measureable effects on stormflows or flood peaks in the North Fork of the Cherry River are expected from any of the proposed harvesting and road construction (EA, p. 78).

6. He is concerned about hauling times and the potential aggravation to the neighborhood. He mentioned concerns about the trucks being on the roads at the same time as school buses. He also is concerned about the noise if trucks haul late at night or early in the morning.

Response: Truck traffic is addressed on pages 147-148 and 152-153 of the EA. Hauling during the hours when school buses would be on the road would not be allowed (see page 148 of the EA). Hauling will be periodic, with heavier traffic during the winter period because of the nature of helicopter logging. Some traffic would be expected during the summer or fall months, but it is likely to be lighter as conventional logging is much slower than helicopter logging. The time of the effects may range from approximately 3 to 7 years. There are likely to be periods of no hauling in this time period. A longer time period would result in fewer trucks during any one period of hauling or shorter periods of hauling during the time frame.

7. He is concerned about heavy trucks coming down the Handle Factory Hollow Road. He is concerned that a truck's brakes may fail and hit a house.

Response: There has been previous hauling of logs on this road and other roads with similar grades in the past. As an agency, we would expect that all contractors keep their log truck in a condition that is required by state regulations, but we have no regulatory control over brakes on log trucks. Forest Service personnel have conveyed this concern to the state highway personnel.

Ron and Kay Swearingen
June 23, 2002

1. Commenter is concerned about truck traffic and mentioned that others in neighborhood are concerned.

Response: See response to comment #1 on June 17, 2002.

2. Commenter is concerned that road will not hold up under truck traffic and that road maintenance will be inadequate. They mentioned that the blacktop on the Weber City Road would not hold up under hauling.

Response: See response to comment #3 on June 17, 2002.

3. Commenter is concerned about flooding. They are concerned about runoff from regeneration areas. They agreed that helicopter logging would have less impact than would conventional. They also asked if most of the area is in the North Fork of the Cherry watershed.

Response: See response to comment #5 on June 17, 2002.

4. Commenters asked about "stopping" the project.

Response: Appeal opportunities and procedures are outlined at the end of the Finding of No Significant Impact/Decision Notice.

5. Commenters stated that trucks would likely be overweight and that the state needs to set up some scales to enforce the weight limit.

Response: Enforcement of weight limits is a state jurisdiction, which is outside the scope of the EA. Forest Service personnel have conveyed this concern to the state highway personnel.

Barry Clutter
W.M. Cramer Lumber Company
Marlinton, WV
June 28, 2002

1. Commenter prefers Alternative 2 and is not in favor of Alternative 1.

Response: Comment noted.

2. Commenter is concerned that helicopter logging hurts small businesses.

Response: Comment noted. Ramifications of helicopter logging on small businesses is addressed in the EA, p. 159. Although some small businesses may be hesitant to bid on helicopter sales, small businesses have bid on and been successful on some helicopter sales. Generally trees are felled and moved to the landing by crews from the western states. Hauling is generally done by local trucking crews. Increased economic activity resulting from timber harvest using helicopter logging may have an overall beneficial effect on small businesses, in spite of short term harmful effects on some businesses. When the logs are harvested and delivered rapidly, filling the purchasers mill yard, the purchasing sawmill may be unable to accept logs from local loggers for a period of time, causing some economic hardship. The fact that this occurs in the winter when weather conditions sometimes slow logging, may help alleviate the situation, or even allow mills to continue working. Economic factors related to prices for timber and lumber may complicate the situation. Some small local businesses may be affected favorably by sales and services to the helicopter loggers.

Robert Kelley
W.M. Cramer Lumber Company
Marlinton, WV
June 28, 2002

1. Commenter prefers Alternative 2 and is not in favor of Alternative 1.

Response: Comment noted.

2. Commenter states that he cannot use his contractors and cannot buy logs for three months for every 1,000,000 of timber logged by helicopter.

Response: Comment noted. See response to Clutter comment.

Bob Marshall – Public Lands Committee Chair
West Virginia Highlands Conservancy
Charleston, WV
June 30, 2002

Note: Commenter referred to page numbers in first EA. Those page numbers are shown in comments. Since pagination changed in the new EA, those page number references no longer fit. The new page numbers are shown in parentheses and italicized to aid commenter in referring to the new EA.

1. We differ in the desired future condition.

Response: The desired future condition is outlined in the Forest Plan, pp, 164-165. The area is to be managed as described under Management Prescription (MP) 6.1 in the Forest Plan. The Forest is obligated by law to use the Forest Plan as overall management direction. The management direction for MP 6.1 identifies a desired future condition, which is a mosaic of tree stands and openings with a near optimum quantity and dispersion of the habitat elements that feature the wild turkey and black bear along with associated wildlife species.

2. You have no need for action.

Response: The Purpose and Need for Action is outlined on pages 6-15 of the EA and is based on the difference between the existing condition and the desired future condition. The need for action includes a need for age class distribution, mature habitat, opening habitat, hard mast production and maintenance of a continuous mast supply, use of normal forest management activities to achieve vegetative diversity and provide a mix of forest products, use of the best timber harvest operation method for slopes over 40%, ensuring that management conforms to standards that enhance and maintain a visually sensitive landscape, and provide access needed for vegetative management activities.

3. The Plan's guidelines are too old.

(In the last comments you sent everyone notes how things change)

Response: The Monongahela National Forest has started the process of revising its Forest Plan. See response to Brian Bird comment #16 of June 6, 2001.

4. It is regrettable that you have done all this work.

It is fine work in some respects, and can yet be a profitable exercise for you.

Response: Comment noted.

5. Page 17 (16) (Eliminate the word "stormflow")

Response: Comment noted.

6. "Removal of trees", as you say can affect "hydrologic function." -- You make no further remark -- even on p 62 (69-70) where "hydrology" and "research" are mentioned.

Response: No significant harmful effects on hydrologic function are expected, as disclosed in the EA, pp. 79-80, 83, 85, and 87. Further background information is available in the project file, including hydrologist input to the EA, and references. Also see response to Swearingen comment #5 on June 23, 2002. Implementation of Forest Plan Standards and Guidelines, Best Management Practices, and site specific mitigation methods would substantially reduce potential impacts to water quality and aquatic and riparian resources (EA, p. 70). Uncut riparian protection strips are included as mitigation measures in the action alternatives.

7. Growing season peak flow just below a clear cut is no a “small to moderate” increase. Note, the enclosed, that the increase from this growing season rain of only about 1 ½” was 9X that of the control. This increase in peak flow begins always to be measurable when the canopy is reduced by 30%. Contrary to your statement downstream sedimentation does occur. The stream channel just below a clear cut must carry many times the flow. It has in the last 80 years. Readjusting this causes channel scour, the generation of gravel and rubble. This occurs even in underground tubes and drainage channels above open channels. This added sediment must work its way downstream as deflecting bars gouging out more sediments with magnifying effects; and where the channel is plugged with deposits, out of bank flooding commonly occurs. It is not that peak flow are “attenuated” (p. 67) (78) downstream, but a magnifying sediment wave has been created to undermine the stream’s “hydrologic function”. Stream banks you note are “sensitive” to erosion (p.80) (88). Added bank stability problems arise from tree topple.

Page 63 (74) begins as nonsense. P. 64 (75) shows concern for tributaries, so further reading is warranted. P. 65 (76) peak flow effects are greatly magnified below. Thinning the canopy beyond 30% does cause increased flows in the summertime and that is when 70% of the storms occur. Again this produces sediments and the channel loses its capacity to carry these increased flows.

After nonsense again, (these effects are not “small,” “non-significant” or of “short duration”) P.67 (78) begins with the acknowledgment “tendency for increased channel erosion from within for a short distance downstream from some harvest areas.” We suggest it is a long distance - to the North fork. “The effect on Desert Branch would be extremely small.” We suggest it would be great all the way to the North Fork of Cherry River. Note that “channel erosion from within” can be a factor. We suggest more sediment in a choked channel can come from the channel bottom and banks than from surface disturbance due to roads or logging.

On page 110 (133) you note “unstable stream beds- not recovered from intensive harvests of the early 1900’s.” We believe this too, and we attribute a great fragility to them. Your earlier harvests and the cleared percentage of the watershed you note may be just enough to have kept it destabilized. Your imagined understanding and human domination of these ecosystem processes of ancient forest life is shot-through this EA. Where is your humility? You do not mention stream steepness and depositional reaches.

Response: Effects on water and soils resources are analyzed in the Watersheds and Soils sections on pages 69-87 and 87-98 of the EA. Further discussion may be found on pages 133-136. Although small measurable increases in stormflow, and possibly peak stormflows, during the

growing season are possible in some of the small drainages, no significant adverse effects are expected. Any such increases would be attenuated in the downstream channel system. No measureable effects on stormflows or flood peaks in the North Fork of the Cherry River are expected from any of the proposed harvesting and road construction. There could be some minor tendency for increased channel erosion within and for a short distance downstream from some of the harvest areas, primarily near the regeneration units. However, overall effects are expected to be minor and short term since the proposed harvest areas have been located and designed to avoid highly sensitive riparian areas along the main stream channels (EA, pp. 75-79). The riparian mitigations in Alternatives 2, 3, 4 and 6 would provide further protection than would the mitigations that were described as part of the Proposed Action, Alternative 1.

8. Page 93 (107) has the revelation that Desert Branch is a brook trout stream. This should have been mentioned in the first paragraph. The second should justify why there should be no logging on a brook trout stream. You need not have gone any further. Today, that's it.

Response: The Forest Plan, which includes a fisheries amendment, allows logging in the watershed of brook trout streams (Forest Plan pp. 82a, 179a, R-7). It requires the use of filterstrips to mitigate potential sediment effects. With the riparian mitigations in the proposed action, there would be no logging near perennial streams. With the riparian mitigations in the other action alternatives, there will be no logging adjacent to any stream channels. Additional area adjacent to stream channels is excluded from logging as shown on the maps for all alternatives. Even though some sediment could enter streams, the amount would be minor and short-term. There would be no impacts on recreational fisheries.

9. P. 18 (17) "Heightened" concerns for water quality and visual deterioration are justified. Views have much to do with recreation and today these are important.

Response: Visual quality and recreation are addressed in the Recreation and Visual Quality Section on pages 141-146 of the EA. Visual quality objectives would be met in the area, EA, p. 142.

10. Wildlife clearings (openings) are suggested in the forest plan that they could make up 5% of the forest, but it is only about 1%. Really, the influence of that 1% is far more than 5%. Clearings and edge are not needed on the National Forest. It is a special place where hunters will find a big wild forest- unique and valued. "Fragmentation" is real, few "consider" it otherwise.

Response: The creation of wildlife openings help to move the area to the desired future condition as outlined in the Forest Plan. Fragmentation is addressed in the Fragmentation section on pages 118-126 of the EA, where it concludes that the remaining core area in the project area will be high enough to avoid adverse effects on bird abundance or viability (EA, pp. 124-125).

11. P. 19 (18) ("Views of unbroken continuous tall tree canopy" are rare and valued highly. (Wonderful that you honestly mention it, and we gather that this impresses you too.) This is one of the great values of the forest, and is so important that it precludes most of your plans.

Response: Visual quality and aesthetics are addressed in the Recreation and Visual Quality section on pages 141-146 of the EA. Visual quality objectives would be met in the area, EA, p. 142.

12. Other “issues” not considered – but must be (their nature is such that they must be)
Forest canopy retention/no clear cuts, etc. to reduce flooding.

Response: Although small measurable increases in stormflow, and possibly peak stormflows, during the growing season are possible in some of the small drainages, no significant adverse effects are expected. Any such increases would be attenuated in the downstream channel system. No measureable effects on stormflows or flood peaks in the North Fork of the Cherry River are expected from any of the proposed harvesting and road construction. The potential for effects on flooding (storm flow and peakflow) are discussed in the effects section (EA pp. 77-79). Total canopy retention, along with no clearcutting, was considered under the No Action Alternative. Alternative 3 would also include no clearcutting.

13. Warming and drying the forest floor

Salamander (you mention on p 95 (*100*)) glad you did. Something is known about them now, and they are an indicator of associated species (snails, millipedes, beetle larvae, mites, worms, shrews and mycorrhiza) We would agree that excess nitrogen will leach nutrients from the soil. This increased biochemical microbial activity will reduce carbon and reduce the organic matter that has the sponge-like ability to reduce run-off. Some commentators like ourselves, believe this to be more important than you do. We agree with their comments.

Response: Warming and drying of the forest floor is discussed with respect to soil microorganisms and decomposition (EA pp. 92, 96) and with respect to some threatened, endangered, sensitive (TES) species (EA p. 136, p. 138). Salamander populations would decline in regeneration and other created openings, but those declines would be specific to those areas (EA, p. 106). While timber harvesting will expose some soil and allow sunlight to reach the forest floor, the amount of exposed soil decreases rapidly as a result of reestablishment of vegetation. Effects would be greatest in regeneration areas and created openings. Effects related to clearcuts, other regeneration openings, and created openings would be limited to less than 5% of the area. Soil disturbance would also occur in the thinning areas, but since a forest canopy would be retained, effects on soil temperature and drying would be much less since shade would be retained.

14. Do leave tree tops on site. They contain 250 lbs/ac of calcium. The harvest is a site impoverishment of another 250 lbs/ac as it is trucked away. The growing forest locks up more and more of the plant available calcium thus impoverishing the site. Old trees are slower growing and take up fewer nutrients, and on the whole they are weaker? and streams are a little richer. Stream available calcium is critical for trout. You note “alkalinity is low.” It is a measure of richness, as well as in acid neutralizing components. This area has received Acid Rain, more than anywhere else- 50 lbs/ac as sulphuric acid- for 50 years. This is 250 lbs/ac. It is sulphuric and nitric acid and has regionally leached away nutrients. The tributaries upstream of Desert Fork have no native brook (or, then, any other fish) as a year round population. They are too acid and infertile to support them. You would expect Desert Fork to have brook trout only with 2 or 3 minnow species at its mouth. The New River geology, you note is predominantly sandstone, and furnishes just

enough nutrients to get brook trout eggs through the critical acid and toxic aluminum springtime challenge. Nutrient budgeting is required. In addition to the impoverishing harvest of 250 lbs/ac, there is a calcium loss associated with clear cuts of another 40 lbs/ac in the first 3-5 years after the clear cut. In this interval the site is warmer and wetter and no roots to take up nutrients. This is a site “loss” of nutrients, but a stream enrichment.

Our eastern forest is not at nutrient equilibrium, not at steady state, but being impoverished at 5 lbs/ac/yr of calcium. (inputs are; wet 2, dry 2 lbs/ac/yr, another 2 lbs/ac/yr are weathered. Total inputs are 6, what leaves in stream flow is 8 to 14 lbs/ac/yr. The difference is 5.) The nutrient level required to maintain this brook trout population should be a major objective of your management. Clearly you should have no impoverishing harvest. If calcium levels were reduced by 10% in stream flow by ignorant forest manipulation this brook trout only fish population would surely die out. It would remain barren for hundreds of years.

Response: Topwood would be left in helicopter and clearcut units and tree limbs and tops would be left on site. Also, See response to soil nutrient comment below (comment # 23). See also EA p. 97. A soils analysis report is in the project file.

15. Some of Desert Fork’s trout potential lies in the fact that pools could be built in reaches where needed to retain water. (Laurel Run of Meadow, below Sherwood Lake has stream improvement devices; this one could also.) Nutrients are an important prohibitive “issue” –also.

Response: The purpose and need for action did not include an immediate need for trout habitat pools. Natural water storage should occur over time as trees fall into streams in uncut areas adjoining the channels (EA, Watersheds, starting on p. 69).

16. P. 23 (21-22) RIPARIA Guidelines so conveniently developed and fine, fail to recognize the canopy nowhere can be reduced by 50%- even 30%. The 20’ wide ephemeral RIPARIA as well

Response: Different riparian measures were used in the proposed action and in the other alternatives as described in chapter II, recognizing site specific needs to protect water quality and allow for continuous development of natural characteristics of riparian areas (EA p. 26). The purpose and need for action is based on Forest Plan Standards and Guidelines for Management Prescription 6.1 areas, which do not preclude timber harvest with such canopy reduction.

17. P. 24 (22) “Savannah”, again mentioned, is a strange concept in this forest. It is southeast, foreign, and inappropriate. There is plenty of this, too, off-the-forest.

Response: Savannahs provide an element of diversity in wildlife habitat and also help move the area towards the Forest Plan desired future condition of having 5% openings in the area, since they are considered in the acreage of openings. The term savannah simply means a wildlife opening that is not completely open, but contains varying numbers and density of tree, shrub and snag habitat distributed throughout the mostly open area.

18. P.24 (22) “Helicopter” logging is another inappropriate idea. It’s use simply means it is too steep to log. Slope 40 and 50% are too steep to disturb with roads or canopy reduction. With less

canopy, the slopes will become wetter. All live tree roots are needed for anchors. They stabilize such slopes, and their loss (15 yrs after a cut) is an effect beyond the slope failure model calculations.

Response: The use of helicopter logging is addressed in the EA, p. 14. The Forest Plan does allow canopy reduction and road building on slopes of 40-50%, with consideration of the best logging method or road construction standards for such areas. Many timber sales have occurred on the Monongahela National Forest on such slopes without serious ill effects to soil or water resources. Helicopter logging is proposed here to provide additional protection to the North Fork of Cherry and to protect scenic values.

Without thinning, some trees will die. After thinning, residual trees will increase in vigor (EA, pp. 53-54.) Root systems of cut trees will remain, although some would be expected to die. However as those root systems die out, those on the residual trees would be expected to expand.

19. You mention “scenic river”...?

Response: Scenery along the river is considered in the analysis. See EA, pp. 56-57 and 141-146. The term “Scenic River” might be construed to indicate that the North Fork of Cherry has a certain status under the Wild and Scenic Rivers Act. This confusing language has been changed in the EA. This river has not been designated as a Scenic River under the Act. It was studied by the Forest Service and was found to have characteristics which would make it eligible for designation under the Act. The highest rating it could be given, according to the eligibility phase of the study, is Recreational (Wild and Scenic River Study Report and EIS on Twelve Rivers in the Monongahela National Forest). No decision has been made regarding its designation. Projects such as those proposed in all the alternatives would be permitted as shown, at similar distances from a designated river classified as Recreational.

20. You mention “only 40% of area (watershed?) can be logged?”

Response: Disturbance is limited to 40% of the opportunity area in a project (Forest Plan 172). This standard is applied to any 6.1 management prescription opportunity area. The total acreage harvested, which is used as the total project acreage, is shown in the EA for each alternative (EA p. 41).

21. P. 28 (26) Of course these riparia sound better

Response: See response to your comment #16. These are the riparian measures to be used in the preferred alternative.

22. Surely the natural thinning (mortality) will occur.

Response: Although natural thinning would occur through mortality, it would not meet the purpose and need or be consistent with the Forest Plan because it would not provide a mix of forest products. Natural thinning by mortality could not be counted on to select for a diversity of mast producing trees, according to the goals and objectives for Management Prescription 6.1. Natural

mortality can also often result in stand regeneration, rather than thinning. Thinning and stocking are addressed in the Forest Health and Stocking section in the EA, pp. 52-55.

23. This forest is attempting to regrow with probably 1/6 fewer nutrients than the original forest had. Calcium today may be 5000 lbs/ac. With 1/10 of this now in tree biomass, and more yet to be taken up as growth continues-we have no assurance that a trunk-only harvest of 250 lbs/ac will leave another 500 lbs/ac of plant available calcium for regrowth. Timber is not a renewable resource in geologies as infertile as this. Caution, and more knowledge is needed. Specifically we need to know the calcium to toxic aluminum ratio in soil water. If this is below 1, its drainage can become toxic to tree roots and mycorrhiza and when it reaches streams to fish gills. Leaching due to acid rain is of similar magnitude to a trunk-only harvest of this forest, so nutrient wise the harvest you contemplate, has already taken place. Moreover as acid rain's acid intensity has been reduced since 1996 almost by half (it's ph now 4.5) It will be leaching out nutrients to the stream from an impoverished watershed (impoverishment rate 5 lbs/ac/yr for 50 yrs = 250 lbs/ac)- and fewer nutrients than ever before now reach the stream. Fish loss, as we clean up or air, can be expected in a great number of such damaged streams. This has occurred as reported in the huge NAPAP 1990 report, due, they said, to low ionic strength of the water. (This is lack of nutrients as reflected in conductivity measurements in the stream).

Response: A soils analysis including soil nutrient samples was performed by the Forest Soils Scientist in July 2003. A report of that analysis is in the project file.

24. Finally brook trout hake in more calcium through their gills than through their gut. In low calcium water they elevate their metabolic rate as though they were in 15 F warmer water- at great stress.- and later mortality. (A second group of supporting papers enclosed with these comments.)

Response: Cumulative effects of acid rain and timber harvest on soil nutrient levels, including calcium, are discussed in the EA, on pages 96-98. Research results are not conclusive about the anticipated effects of biomass removals or whole tree harvesting. Timber harvests planned under all the Desert Branch alternatives are much less intensive, and include mitigations which would be likely to protect against the possibility of long term cumulative effects of harvests on soil nutrient depletion, and on nutrient levels in streams.

Much of the research related to potential soil nutrient depletion concerns is not directly applicable to the Desert Branch analysis. Timber harvesting in Desert Branch would occur at a much lower intensity than that studied. In addition to the lower intensity of the harvests themselves, as compared to the intensive management discussed in most of the research, several other factors would serve to ameliorate potential effects of soil nutrient depletion, should current hypotheses be borne out by future research. These factors include the riparian mitigation measures, reserve trees, infrequent harvests on the same acreage, and removal of sawtimber only in the helicopter units.

Soils within the project area may be sensitive to soil acidification, but current research results are somewhat conjectural with regard to whether or not soil or aquatic calcium effects could be detected, even with more frequent and more intense harvests than those proposed. The practice of continually regenerating stands so that succession is kept in aggrading stages would be expected to

draw heavily on soil nutrients, including calcium, but the related research is not conclusive at this time.

24. P. 45 (51) Oak can be maintained in “gaps”

Response: Red oak is classified as intermediate in shade tolerance, but it does not develop well in the shade of other trees and requires direct sunlight in order to develop into large trees. Single or few tree gaps would provide partial sunlight to those areas, but these areas would also be shaded for part of the day, thereby not providing adequate sunlight for red oak to develop into large trees.

25. P. 47 (53-54) Again, no canopy reduction beyond 30% not 60%, not anywhere.

Response: Effects of thinning are described in the Forest Health and Stocking section on pages 52-55 of the EA. No stands would be thinned below the 60% level according to the Allegheny Hardwood Stocking Guide.

26. P. 75 (70) “stream alkalinities are low”. They are critically low. New River geology produces just enough nutrients to sustain the brook trout. Other fish are not as thrifty. Desert branch is a little richer near the mouth where in summer, when it is again richer, minnows reinvade.

Response: See response to comment # 23, and cumulative effects on soils in the EA (pp. 96-98). Any long term cumulative effects on soil nutrient pools, as a result of this project, in combination with past and future projects, including timber harvest, would be difficult to detect.

27. P 89 (101) “old growth” information is well done. Again, besides wilderness 5 % scattered as islands throughout the Monongahela may not be enough. They are anchors into the past and the original forest. Their distribution, with new wilderness areas are of much concern and a review (a “revision”) is needed.

Response: The specific manner of providing for old growth is a Forest Plan level matter. Cumulative effects on old growth or mature habitat are discussed in the effects section. None of the action alternatives would reduce the potential old growth pool below 45 percent of the area (EA, pp. 127-128).

28. P. 93 (107) At last you state Desert Branch is a brook trout stream. You say it is destabilized. You say no more. It is important!

Response: Effects on fisheries are analyzed in the Fisheries section on pages 107-108 of the EA. Also see response to comment #8.

29. P. 94 (107) None of the alternatives selected would have any impact on the recreational fisheries” Nonsense again. Nutrients Limit.

Response: See response to comment #23 concerning nutrients. The effects of the project on soil nutrients, and thus on aquatic nutrients, would be expected to be very similar to the effects of the

no action alternative. Soil nutrients are discussed in the EA (pp. 96-98) as a potential future cumulative effect of many entries for timber harvest, which are not predictable on the basis of current research.

30. P 96 (118) Birds and fragmentation are done well. A “core” on this watershed may be reduced from 67% to 52%. Your information may not lead to the idea that 42% is ok.

Response: Comment noted. Fragmentation is addressed in the Fragmentation section in the EA, pp. 118-126. Fragmentation can disrupt corridors for movement of flora and fauna throughout a forest (EA, p. 120). Fragmentation can result from natural features, such as the North Fork of Cherry, in this area (EA, p. 121). A study has shown that fragmentation resulting in the range of 42% core area or greater does not appear to have adverse effects on bird abundance or viability (EA, pp. 120, 124-126). None of the alternatives would reduce the core area below 42%.

31. P. 111 (134) Poor

Response: Comment noted but is not specific, appears to disagree with effects on Aquatic and Riparian habitat. See responses to other comments related to this type of habitat.

32. p. 112 (136) add Madeophylax sp. to the list of species that live in rocky habitats.

Response: The addition of this group of species to the list would not have resulted in any differences in effects from those mentioned for species living in rocky habitats. This species was not included specifically, since it is not on the Regional Forester’s List of Sensitive Species, nor is it present on the Regional Forester’s List of Sensitive Species for Region 8, which includes the George Washington and Jefferson National Forest. Members of this group of terrestrial caddisflies are known to occur within the North Fork of Cherry watershed but have not been identified as a sensitive species.

33. P. 113 (136) Your potential effects are incomplete as are the migration measures inadequate. Madicolous and hygropetric habitat on these rock outcrops are dependent on a minimal film of water. Any disturbance of the surface or sub-surface water flow above these rock outcrops could alter and eliminate this special habitat, to the detriment or elimination of the species requiring it. Schuster (1993, USF&WS) reports that “any activity that changes the drainage patterns around the walls will have adverse effects on Madeophylax populations.” Protecting these rock outcrops from sunlight is not enough. All rock outcrops should be surveyed for Madeophylax.

Response: We are not required to protect or manage for terrestrial caddisflies (madeopylax), especially considering they are not protected by the Endangered Species Act or listed on the Regional Forester’s Sensitive Species List. There are no surveys planned for terrestrial caddisflies within the project area, or across the Forest. Madicolous and hygropetric habitat, also referred to as “seeps” are protected under the Forest Plan.

34. P. 116 (139) Aesthetics are covered. Glad, they are of overriding importance.

Response: Comment noted.

35. Diversity is often mentioned. We do not support even the area the USFS region says must be set aside for T&E species. Many have habitat/substrate in great abundance near-by off-the-forest. We ask these areas be 1 or 2 %. Clearings for wildlife and younger stands are not appropriate.

Response: None of the alternatives would result in loss of viability for any of the Threatened, Endangered, Sensitive Species; see the Threatened, Endangered and Sensitive Species (TES) section of the EA (pp. 128-139). Clearings for wildlife and younger stands are included in Forest Plan Standards and Guidelines see EA p. 17, p. 56, pp. 6-7.

36. Thank you for your work. We all have learned a lot from this.

Response: Comment noted.

Mark Donham
Heartwood Program Director
Brookport, IL
June 30, 2002

1. Forest Service should provide e-mail address in cover letter in the future for people to comment by email.

Response: Comment noted. Currently, the Forest Service website provides a means for individuals to send e-mail regarding projects. This comment was received by e-mail. The cover letter for the July 2004 EA includes an email address.

2. The Monongahela National Forest is currently working on a forest plan amendment to develop guidelines for management of threatened and endangered plants and animals. The commenter states that the Forest Service should be putting all of its energy into the amendment rather than at the same time developing an individual project such as Desert Branch.

Response: The need to move forward with project planning is a management decision which falls under the Administrative Procedures Act and is out of the scope of this analysis. The Forest Service has many ongoing projects and operations that must continue during the development of any Forest Plan amendment. Projects and operations on the National Forest are in various stages of completion at any one time in order to move forward with active forest management consistent with the Monongahela Forest Plan. All TES species are protected by compliance with the Terms and Conditions of the Biological Opinion, thus the most recent available information with regard to protecting TES species has been used in the development of this project. In addition, when the Forest Plan amendment is signed, all current projects would be evaluated with regard to compliance with the then-current Forest Plan, and changes would be made as necessary to ensure compliance.

3. Commenter expresses lack of confidence in mitigation measures.

Response: Mitigation measures identified for the Desert Branch project have been used in similar places across the Forest and have shown to be successful when implemented as planned. Annual Forest monitoring reports summarize the results of formal monitoring, and informal monitoring is also done. Mitigation measures have been designed to include areas of concern from the public and resource specialists. Projects are inspected before, during, and after implementation to assure compliance. Commenter and other members of the public are welcome to inspect results to determine personally, whether the anticipated results are achieved.

4. Commenter mentions that mulch is not always placed on skid trails.

Response: Mulching of disturbed areas is discussed on page 92 of the EA, to ensure that bare soils are not exposed through winter and periods of high rainfall. Skid trails are waterbarred to reduce erosion potential. In addition mulch is placed on higher grade areas and other high hazard areas on skid trails.

5. Commenter states that all of the national forests are ecologically critical areas and that the project will impact threatened and endangered species.

Response: None of the alternatives would result in loss of viability for any of the Threatened, Endangered, Sensitive Species; see the Threatened, Endangered and Sensitive Species (TES) section of the EA (pp. 128-139).

6. Commenter requests that the forest withdraw this proposal until it completes the guidelines for protection of threatened and endangered species and revises the Forest Plan.

Response: See response to comment 2 above

Allan C. Glasscock
Wildlife Biologist – National Forest Coordinator
West Virginia Division of Natural Resources
Elkins, WV
July 1, 2002

1. Commenter supports tentative selection of Alternative 1 with the addition of minor projects that will hopefully mitigate effects associated with the proposed action.

Response: Alternative 6 was added to the EA with this revision, in response to comments received on the original EA, sent out in May, 2002. Alternative 6 is very similar to Alternative 1.

2. Commenter recommends that all savannahs and wildlife openings be maintained regularly. Commenter suggests that any and all openings established be located where permanent access is available for maintenance.

Response: Priorities for wildlife opening maintenance are determined depending on budget, personnel, and other factors that are outside the scope of the EA. However, the project was

designed to minimize maintenance needs for wildlife openings and for roads, and facilitate a variety of maintenance methods including hand clearing.

3. Commenter suggests making sure that all slash and stumps are removed to facilitate maintenance.

Response: Slash and stump removal would only be required for mechanical mowing methods. Slash is routinely piled for use by wildlife.

4. Commenter suggests using cool season grasses for seeding.

Response: At these elevations, such species are routinely considered, according to Forest Plan direction (Forest Plan pp. 79, S-6 to S-9). However, native seed appropriate for the elevation and soils may also be considered for use.

5. Commenter suggests using irregular borders on wildlife openings to increase edge effect.

Response: Specific boundaries on wildlife openings are determined based on the presence of specific habitat values, such as mast producing trees, rock outcrops, water sources, and snags.

6. Commenter suggests leaving a spacing of 50 to 60 feet between leave trees and favoring oak, hickory, and cherry as leave trees.

Response: Spacing of leave trees is also determined mostly by the distribution of habitat values on site.

7. Commenter favors projects such as chestnut release and the aspen planting and the guidelines for grape management in the project.

Response: Comment noted.

8. Commenter favors the construction of 1.3 miles of new road and the closure of that road to public motor vehicular use after the proposed action is completed.

Response: Alternatives 1, 2, and 6 include the construction of the new road mentioned in the comment. Since road FR 946 is closed to public vehicular use, that road would also be closed to public motor vehicular use after the action is completed.

9. Commenter does not support stand conversion from existing species. Commenter does support favoring mast producing species such as oak, hickory, and cherry in residual stands.

Response: See the Forest Type/Ecological Landtype section (EA, pp. 45-52) for discussion of species diversity. There are no proposals to convert stands to other species. However, mast producing species such as oak, hickory, or cherry would be favored in thinnings. Proposed regeneration areas were selected to provide an opportunity to naturally regenerate species such as oak or cherry on those sites.

10. Commenter suggests using tubing as well as planting to ensure that oaks will be part of the new stand in regeneration areas.

Response: Planting and tubing were considered, but not included in an alternative, since other methods to enhance the natural mast production potential of the area were used, especially shelterwood harvest for black cherry, two aged harvest in an area with some advance regeneration, and retention of mast producing leave trees in thinnings and regeneration harvests. Unless gypsy moth damage destroys the oaks, the current oak component in regeneration areas is likely to be restored (EA p. 49).

11. The fragmentation analysis should not be used to limit management activities in a 6.1 management prescription.

Response: Comment noted. The fragmentation analysis was not used to limit management activities in the area. However, it is used to guide the decision maker in his/her decision (EA, p. 120). A study has shown that fragmentation resulting in the range of 42% core area or greater does not appear to have adverse effects on bird abundance or viability (EA, pp. 120, 124-126). None of the alternatives would reduce the core area below 42%.

12. Commenter supports maintaining old growth as an element of diversity and recommends following standards and guidelines in current Forest Plan. Commenter suggests identifying and designating old growth stands during future project analysis.

Response: Sufficient old growth stands are being maintained to comply with Forest Plan Standards and Guidelines for this habitat element; see the Old Growth section of the EA (pp. 126-128).

13. Commenter recommends that proposed wildlife projects be adequately funded and accomplished. Commenter implies concern that some projects may not be accomplished because of inadequate funding or planning.

Response: Once the decision notice has been signed and been through the appeal process, then the projects can move forward as planned. Based on the current funding trends for the Forest, it is expected that the projects will be funded and implemented. Should funding levels change, then the project would be evaluated and prioritized for implementation.

Jim Bensman, Heartwood Forest Watch Coordinator
585 Grove Ave., Wood River, IL 62095-1615
June 28, 2002

1. Logging is an inappropriate use of public forests and is contrary to the public interest. Heartwood, therefore, opposes this sale.

Response: Congress has determined that producing and selling trees for timber is an appropriate

use of public (national forest system) land and is in the public interest. This issue is beyond the scope of this analysis and will not be considered further. See response to Scherübel comment #1 in Appendix C.

2. Additionally, the Purpose and Need needs to indicate the true purpose and need for the project (i.e., to approve logging so that money can be illegally skimmed from the KV fund to support the Forest Service bureaucracy.) The Forest Service is so far out of control that many times it claims it does not have to obey the law, because there were no comments indicating the law should be followed. Therefore, we wish to raise the issue of all laws that apply to the project need to be followed.

Response: The purpose and need defined in the Desert Branch EA is consistent with regulations set forth by the Council on Environmental Quality (CEQ)(40 CFR 1500-1508) and with Forest Service regulations.

See response to Scherübel comment #2 in Appendix C.

PUBLIC OPINION

3. A scientific poll conducted for the Forest Service revealed that most Americans oppose logging, mining, and grazing on public forests. (Bruce Hammond, "Forest Service Values Poll Questions Results and Analysis." The question was, "Natural Resources in Public Forests and Grasslands Should be Made Available to Produce Consumer Goods." Forty-seven percent disagreed with 26% strongly disagreeing. Seventeen percent had no opinion and 36% agreed. Statistically this represents a significant disagreement with the statement.) In May 1996, ICR Survey Research Group conducted a nation-wide public opinion survey for Lake Research. The survey found most Americans support ³ending commercial logging . . . on all federal publicly owned lands. Several states also have conducted public opinion surveys which have found most people in that state do not want their National Forest logged. The most recent nationwide public opinion survey [Republican Pollster American Viewpoint conducted a national survey of 1,000 registered voters for the Heritage Forests Campaign from December 28, 1999 through January 2, 2000. All interviews were conducted by telephone. The margin of error for this study is $\pm 3.2\%$.] asked, "In general, do you favor or oppose allowing logging, mining, and other industrial activities on National Forest lands?" Sixty percent (including 43% strongly) were opposed and only 31%, (including 10% strongly) were in favor. Another nationwide public opinion survey (National Survey conducted by Market Strategies, Inc. and Lake, Sosin, Snell, Perry and Associates, Inc. N=800 registered voters June 22-25, 1998. Market Strategies, Inc. has conducted polls for Newt Gingrich, Bob Dole, George Bush, and Gerald Ford.) asked: "There has been a national debate about whether the U.S. Forest Service should continue to sell timber from our national forests. Do you favor or oppose continuing to allow timber companies to log in our national forests? (IF Favor/Oppose ASK:) And do you STRONGLY (favor/oppose) this or just SOMEWHAT (favor/oppose) this?"

The results were: Strongly favor, 7%; Somewhat favor, 17%; Neither, 2%; Somewhat oppose, 19%; Strongly Oppose 50%; Don't Know, 5%, Refused, 0%. Note: Even voters in the west, by a 2-1 margin (62%/31%), oppose continuing to allow timber companies to log in National Forests.

Opposition is 70% or more in other regions of the country.

In an interview, former Chief Thomas, referring to public opinion, stated: "For example, it was just about evenly split about whether we should harvest timber from national forests or not. That's an interesting fact for us to have at our disposal." The Forest Service should consider public opinion in its analysis as the National Forests belong to U.S. citizens, not the logging corporations. What do the words, "government of the people, by the people, and for the people" mean to the Forest Service? As former Chief Thomas stated on May 21, 1996, "These lands belong to the people and must be managed by democracy. If we don't have the people with us, we fail." As The Declaration of Independence states, "Governments are instituted among men, deriving their just powers from the consent of the governed, that whenever any form of government becomes destructive of these ends, it is the right of the people to alter or to abolish it . . ."

Response: The projects we are analyzing at this time are site specific and the analysis addresses physical, biological, and social impacts in the Environmental Effects Chapter of the Environmental Assessment (EA). The purpose and need for the proposal is consistent with the Forest Plan. See response to Scherübel comment #3 in Appendix C.

4. Alternatives, which are not connected to logging, must be developed and considered to respond to the majority of Americans who do not want their National Forests cut down. In *Sierra Club v. U.S.D.A.*, 1997 WL 295308 (S. D. Ill. September 25, 1995) aff'd by order adopting opinion 116 F.3d 1482 (C.A. 7 (Ill) 1997), the Court ruled that while the Forest Service is allowed to log National Forests, the Forest Service is not required to cut down the public's forests. "The Forest Service was created by and for the people. Hence, we communicate with and listen to the public . . . The results on the ground reflect . . . full and fair consideration of public opinion." The Forest Service Ethics and Course to the Future October 1994. The Forest Service should "serve the people" as it claims to do. Claiming that what the majority of Americans want is "beyond the scope of the analysis" is ignoring the public and subverting democracy. We think James Furnish's departing comments put it well:

"What remains confusing and troubling to me is that the Forest Service seems to consider itself as our most important constituency. We are much more adept at being aware of and acting on the "best interests" of the Forest Service than we are of the best interests of the public. This introversion hasn't served us well for the last 20 years and it won't in the future. We will never truly "serve people" until we have the courage to tell our employees that we need to set our previous views aside."

Additionally, defining the purpose and need so narrowly to exclude alternatives that do not cut down the public's forests is illegal. Since there is legislation in Congress to end logging on public lands, an alternative must be developed to manage the area in the manner prescribed in HR 1396, the National Forest Protection and Restoration Act.

Response: See the response to your comment #1. The No Action Alternative would include no timber harvest. Many protective and restorative measures are included within the alternatives which include timber harvest. See Alternatives Considered but not Carried Through Analysis on p. 39.

5. The no-action alternative does not adequately respond to the wishes of the majority of Americans who do not want their natural heritage converted into stumpland. The no-action alternative has almost no chance of being selected due to all the time and money invested in developing the project. For example, in an May 9, 1997, appeal resolution meeting, Hoosier National Forest Supervisor Ken Day stated, "I don't want to go through all these documents and then declare, all this work, and then say 'Okay I'm gonna select a no-action alternative and not do anything afterwards.' Why do the analysis?"

In 1998, we did a nationwide FOIA request to find out how often the Forest Service selects the no-action alternative for a proposed timber sale. The results were:

- * Number of proposed timber sales in the last 5 years with No-Action Alternative selected: 8
- * Number of sales with No-Action Alternative selected since Michael Dombeck became Chief on January 6, 1997: 0
- * Last time No-Action Alternative Selected: December 13, 1996
- * Acres of timber proposed to be cut for which No-Action Alternative selected in last five years: 7,362
- * Acres logged in the last five years (from TSPIRS reports): 4,168,282
- * In the last five years, the Forest Service logged 567 times more acres than they selected the no action alternative for.
- * "[The] Forest Service prepares 4,000 to 5,000 environmental assessments annually, of which about one-half are for timber sales. In FY 1997, Forest Service awarded contracts for 232,110 timber sales." USDA/OIG-A/08801-10-At at 4.

If there is a range of alternatives that have projects other than logging, the Deciding Officer would have alternatives that respond to public will and provide projects for all the time and money invested in the analysis. If there is not an alternative with only non-logging projects, the Forest Service will have ended its inquiry at the beginning as there will be a pre-determined result of logging in the project area.

Response: The use of commercial sales as a tool to accomplish vegetation manipulation work was addressed during Forest Plan development. Page 74 of the Forest Plan states--"Commercial timber sales shall be the means of accomplishing most vegetation manipulation work."

In the Desert Branch area, implementing a timber sale in the project area would not result in significant adverse effects to natural resources and would be the most cost effective means of meeting multiple management objectives and the specific purpose and needs of this area (EA, Purpose and Need, p. 6 and Chapter III -Environmental Effects, pp. 43).

Also, see response to Scherübel comment #5 in Appendix C.

SCIENTISTS CALL FOR END TO LOGGING NATIONAL FORESTS

6. Over 200 scientists have signed a letter which calls for an end to commercial logging on National Forests. The letter and list of signers is at: <http://www.sierraclub.org/logging/letter/>. The analysis needs to consider this letter.

Response: See response to Scherübel comment #1.

NEED FOR TIMBER SALE

7. The analysis needs to address the need for the timber sale. Just because the Forest Plan allows timber sales, one cannot conclude there is a need for the sale. The Forest Service must disclose site-specific monitoring data which demonstrates that there is a need for the sale. The need analysis must also address why natural processes will not create enough early successional habitat. If the analysis claims a need for early successional habitat, the analysis must demonstrate that there is a need for the type of habitat that the Forest Service creates as opposed to the type of early successional habitat that is created naturally. We also request that the MIS species for early successional habitat be changed to the only creature that truly requires the type of habitat (devastation) created in Forest Service timber sales: Forest Service bureaucrats.

Response: Site specific data was used throughout the EA to demonstrate the site-specific need for action. The contribution of natural processes to early successional habitat are discussed in Alternative 5, No Action.

The need for early successional habitat is discussed on page 6, and in the Effects Section, especially the Age Class Distribution section beginning on page 56 of the EA. MIS species are listed in the Forest Plan (pp. 83 and L-1); changing these species would be outside the scope of this analysis. MIS species are also addressed on pages 108-118 of the EA.

BIODIVERSITY & FOREST FRAGMENTATION

8. The issue of biodiversity and forest fragmentation needs to be considered. In an interview, former Chief Jack Ward Thomas summed up why these issues are so important: "First don't let habitat situations get so bad that species get listed. That's playing Russian roulette. Once a species gets listed as threatened or endangered, it quickly slips out of anybody's hands and into the hands of the regulatory agency. That means you get ahead of the situation. You ask "How are we going to address this circumstance in a rationale, reasonable fashion, in a coordinated manner so that it is not necessary to list the plant or animal?" . . . One would not want to repeat the exercises of the Pacific Northwest where nobody would face the issue and everybody continued to twist away from the inevitable. If you look at the history of that particular issue, solutions were Proposed and rejected, back and forth. The social and economic impacts kept increasing with each ratchet. The earlier you can address these issues, the more chance it will be addressed rationally with minimal impact. The longer you wait, the more options you lose, and the more dramatic the effect becomes in the end." (Seeing the Forests and the Trees: An Interview with Jack Ward Thomas. "Wisconsin Natural Resources," April 1995.)

Response: Forest fragmentation and its effects on wildlife species is discussed in the Fragmentation section on pages 118-126 of the EA. For the Desert Branch project, the effects to endangered, threatened, and sensitive species were evaluated and described in the Threatened, Endangered and Sensitive Species (TES) section on pages 128-139 of the EA. No significant effects are expected.

9. It is time to act to protect neotropical migrants and biodiversity in general. The longer the Forest Service waits, the worse the problem becomes.

Response : Effects on neotropical migrants and biodiversity are analyzed in the Wildlife and Fragmentation sections of the Environmental Effects Chapter of the EA (p. 98 and 118). Neotropical migrants and biodiversity will not be significantly affected by the alternatives.

See response to Scherübel comment #8 in Appendix C.

10. Biodiversity and forest fragmentation must be addressed in regard to all species, not just birds. This includes, but is not limited to: mammals, invertebrates, plants, insects, micro-organisms, reptiles, and amphibians.

Response: Forest fragmentation is addressed in the Fragmentation section (p. 118) of the Environmental Effects Chapter. See response to Scherübel comment #9 in Appendix C.

The depth of analysis and conclusions documented in the EA are sufficient for the Responsible Official to make an informed decision about the impacts of actions taken in the project area. The effects of the No Action Alternative on various species and aspects of forest biodiversity provides a baseline for comparison with the action alternatives.

11. The degree to which this area provides a biological corridor and its value should be considered.

Response: No permanent changes from forest vegetation to agricultural land are proposed; therefore, the entire area would continue to provide a link with neighboring forested lands. See response to Scherübel comment #10 in Appendix C.

12. Sampling effects and minimum area requirements of all species should be addressed.

Response: There is no requirement to analyze all species within the project area.

13. The impact of cowbird parasitism and predation to forest interior birds should be prominently considered. The analysis of the impacts to forest interior birds needs to address nesting success. Some studies have documented forest interior birds in recently logged areas. The presence of these species in these areas normally indicate that the species are being harmed. Forest interior birds normally do not successfully reproduce in recently logged areas. These areas, in essence, have become ecological traps. The need for large tracts of forests should be considered.

Robbins, Chandler S., Deanna K. Dawson, and Barbara A. Dowell, "Habitat Area Requirements of Breeding Forest Birds of the Middle Atlantic States." Wildlife Monographs No. 103, July 1989.

Solheim, S. L., W.S. Alverson, and D.W. Waller, "Maintaining Biotic Diversity in National Forests: The Necessity for Large Blocks of Mature Forests." Technical Bulletin Vol. 4 No. 8, School of Natural Resources, the University of Michigan.

Robinson, Scott K. and David S. Wilcove, "Forest Fragmentation in the Temperate Zone and its Effects on Migratory Songbirds." Bird Conservation International 4:2330-249.)

Response: See response to following comment.

14. A study published in Science contained these findings and recommendations for neotropical migrants:

"Nest predation and parasitism by cowbirds increased with forest fragmentation in nine midwestern landscapes that varied from 6 to 95 percent forest cover within a 10-kilometer radius of the study areas. Observed reproductive rates were low enough for some species in the most fragmented landscapes to suggest that their populations are sinks that depend for perpetuation on immigration from reproductive source populations in landscapes with more extensive cover.

"Our results suggest that a good regional conservation strategy for migrant songbirds in the midwest is to identify, maintain and restore the large tracts that are most likely to be population sources. Further loss or fragmentation of habitats could lead to a collapse of regional populations of some forest birds. Land managers should seek to minimize cowbird foraging opportunities within large, unfragmented sites. In more fragmented landscapes, the reduction of cowbird parasitism may require trapping and large scale restoration efforts, whereas reduction of local forest edges may reduce nest predation and increase mating success. . . . Increasing fragmentation of landscapes, however, could be contributing to the widespread population declines of several species."

(Robinson, Scott K., Frank R. Thompson III, Therese M. Donovan, Donald R. Whitehead, & John Faaborg, "Regional Forest Fragmentation and The Nesting Success of Migratory Birds." Science Vol. 267 March 31, 1995
Pages 1987-1990.)

The analysis needs to consider these findings and recommendations. A follow-up study conducted in a heavily forested area concluded:

The conclusion is that some management practices (clearcuts, forest openings, and possibly regeneration openings) may cause a reduction in the reproductive success of birds nesting in adjacent forest. Rates of parasitism are significantly higher for many species in these contexts and daily nest mortality is also slightly higher. Cowbirds appear to be preferentially attracted to openings within the forest and then direct much of their nest-searching activity into forest adjacent to the openings.

It follows from this that the quality of a forest tract as a "source" will depend on the structure of the landscape within the forest tract. Tracts with many internal openings and edges will, in general,

produce fewer young per nesting attempt than tracts with few disturbances. Accordingly, management for viable populations of NTMB should involve minimizing the amount of internal opening and edge.

Whitehead, Donald R. "The Effect of Landscape Pattern and Timber and Wildlife Management Practices on the Reproductive Success of Neotropical Migrant Landbirds in South-central Indiana." November 1995. The following additional studies also need to be addressed: Winslow, Donald E., Patrick J. Doran, Donald Whitehead, Grant M. Greenberg, Matthew A. Koukol, Elizabeth A. Geils, R. Bernadette Slusher, & Thomas B. Ford, "The Reproductive Success of Forest-Dependent Songbirds in South-Central Indiana: Effects of Forest Management Practices" and Doran, Patrick J., Donald R. Whitehead, Donald E. Winslow, "Within-Landscape Patterns of Land Cover and the Nesting Success of Neotropical Migrant Birds in South Central Indiana." The analysis needs to consider these findings.

The analysis needs to consider Desrochers, Andre, & Susan J. Hannon "Gap Crossing Decisions by Forest Songbirds during the Post-Fledging Period" *Conservation Biology*, Vol II, No. 5 October 1997, pp 1204-1210.

Response: Effects of fragmentation on forest interior birds are discussed in the Fragmentation section (p. 118) of the Environmental Effects Chapter. The effects proposed activities will have on interior forest habitat, and the amount of edge created, are described on pages 124-126 of the EA. The level of fragmentation provided by the action alternatives is not expected to have adverse effects on bird abundance or viability, with core areas occupying 52 percent (Alternative 1) to 67 percent (Alternatives 3 and 5).

Also, See response to Scherübel comment #13 in Appendix C.

15. The issue of the impacts to herbaceous understory needs to be addressed. Research indicates herbaceous-understories never recover from logging. (Duffy, David and Albert J. Meier, "Do Appalachian Herbaceous Understories Ever Recover from Clearcutting?" *Conservation Biology* Vol. 6 No. 2 June 1992

Response: Varied research results pertaining to effects on herbaceous understory plants are discussed in response to Scherübel's comment #14 in Appendix C.

Effects on habitats where sensitive species, including some herbaceous understory plants are discussed in the Threatened, Endangered and Sensitive Species (TES) section, starting on page 128, and in effects on other vegetation in the Other Vegetation section, starting on page 61. No significant impacts on herbaceous understory plants are expected.

See response to Scherübel comment #15 in Appendix C.

16. The analysis needs to consider the degree to which the alternatives would impede the movement and dispersal of closed-canopy forest wildlife species between stands and larger regions. The analysis should present and quantify the degree of fragmentation within the project area that

has already taken place and those that will occur as a result of the various alternatives. These patterns need to be compared to the historical patterns that existed prior to human disturbance.

Analysis needs to be conducted and presented to show the range of potential impacts for the following variables:

- €total amount and distribution of late-successional and mature forest habitat.

- €total amount and distribution of important wildlife habitats now uncommon due to past human activity (e.g., riparian forests, native grasslands, etc.).

- €total amount and percentage of forest habitat compromised by edge effects.

- €size distribution of habitat patches by seral stage and forest type.

- €forest patch perimeter to edge ratios.

- €amount and distribution of roadless area within and adjacent to the planning area.

- €degree of connectivity between both individual forest stands and larger habitat blocks.

- €degree of structural contrast between habitat patches.

- €population viability analysis for species or feeding guilds most prone to fragmentation effects (e.g., area sensitive mammals, forest-dwelling songbirds).

Response: Movement and dispersal of closed canopy wildlife species between local areas is discussed in the Fragmentation section of the EA, pp. 118, (primarily for birds) and in the Wildlife section, pp. 98, for salamanders (pp. 100, 106) and species in the turkey bear association (See Management Indicator Species (MIS) section starting on page 118). The range of potential impacts to the above variables are displayed on p. 122. Although movement within certain local areas will be restricted for some species, it will not lead to significant effects. Comparisons to historical patterns that existed prior to human disturbance are not provided although some references are made to prehistoric landscapes in the Heritage Resources section (p. 148).

17. Existing conditions regarding these variables must be considered within the historical ranges of natural variability (i.e., what was likely there before large-scale human alteration of the landscape).

Response: Existing conditions are measured against desired future conditions as described in the Forest Plan. The range of natural variability is a concept gaining some acceptance for programmatic forest planning. It is more appropriately addressed at the programmatic level. For project planning and analysis, the Forest Plan desired future conditions are used. Discussion of the ecological landtypes and potential vegetation may be found in the Forest Types/Ecological Landtype section starting on page 44 of the EA.

18. The analysis must define and measure biodiversity both in terms of the existing condition and the condition that would result if each of the alternatives is implemented. The analysis must consider the vulnerability, reduction from historical abundance, and the regional importance of all species in the project area. The analysis must use the pre-settlement condition of the project area as a benchmark for comparison with the existing condition and proposed changes to the project area. The analysis must consider the functional, structural, and compositional attributes of biodiversity. The analysis needs to evaluate the existing condition of biodiversity, and compare it with the natural range of variability.

Response: The items requested here can be categorized as components of biological diversity. We looked at the ecological classification system developed for the Monongahela National Forest to determine the possible effects of the various alternatives. Regarding landscape context, this project extensively looked at the effects of the project on the landscape. Activities were prescribed based on the desired future condition of the area from a landscape perspective.

The depth of analysis is sufficient to allow the Responsible Official to determine what the effects would be under each alternative

19. The Project Area needs to be considered within a landscape context. The analysis needs to consider the importance of maintaining connectivity between both individual and larger habitat blocks. To adequately consider the impacts of the project on biodiversity at the landscape scale, the following analysis must be conducted for all of the alternatives:

- €size distribution of habitat patches for all community types and forest seral stages.

- €patch size diversity index.

- €degree of connectivity maintained between habitat patches at various scales, particularly between those patches that are now uncommon in the landscape (e.g., late successional forests, roadless areas).

- €vegetation mosaic patterns.

- €cumulative effects at scale of watershed and regional ecosystem.

- €comparison of landscape patterns created by development to those created by natural disturbance regimes for all the above variables.

- €maintenance of uncommon or unique landscape elements (e.g., rare plant communities, natural ecotones, undistributed vegetation along environmental gradients, etc.).

Existing conditions regarding these variables need to be considered within the context of their historical ranges of natural variability (i.e., what was there before large-scale human alteration of the landscape?).

Response: The Project Area includes the National Forest land and a few acres of private lands within the OA boundary. The area was analyzed within the landscape scale and includes some parameters suggested by the commenter. Although the U.S. Forest Service does not determine activities on private lands, activities on private lands are considered in determining the effects of activities on National Forest lands. See pages 43, 44, 61, 71, 73, 105, 118, 123, 126, 128, 132, 138, 146, 148, and 155 of the EA. A watershed assessment and Forest wide roads analysis were also used to provide landscape scale context.

USDA Forest Service. November 19, 2002. Roads Analysis Report, Desert Branch OA, OA Scale Roads Analysis, Monongahela National Forest, Draft 2.0. Elkins, WV

20. The analysis needs to consider the cumulative and site specific effects of logging on biodiversity. The analysis must consider impacts on the following levels of diversity: 1) regional landscape, 2) community-ecosystem, 3) population-species, and 4) genetic. The analysis area must be large enough to consider biodiversity on all these levels.

Response: See responses to your comments 12 and 23.

Populations and species of wildlife were considered in the analysis, primarily with regard to the habitat characteristics needed to maintain populations within the project area. Wildlife, and wildlife habitat was described in many contexts throughout the EA, including discussion in the context of each Management Indicator Species (MIS) (EA, pp. 108). Additional information on MIS was included within the EA for each TES species, and for non-TES species for which habitat exists within the area. The EA sections on specialized habitat types for certain sensitive species is descriptive of some of the habitat relevant to non-sensitive species as well.

21. The regional landscape analysis needs to: 1) Identify the distribution, richness, and portions of patch (habitat) types and multipatch landscape types; 2) Consider the collective patterns of species distributions (richness, endemism); 3) Consider heterogeneity, connectivity, spatial lineage, patchiness, porosity, contrast, grain size, fragmentation, juxtaposition, patch size frequency distribution, perimeter area ratios, and the pattern of habitat layer distribution; and 4) Consider the disturbance processes (areal extent, frequency, or return interval, rotation period, predictability, intensity, severity, and seasonality), nutrient cycling rates, energy flow rates, rates of erosion and geomorphic and hydrologic processes, and human land-use trends.

Response: Regional landscape patterns were considered at the Forest Plan level of analysis which is incorporated by reference.

This project-level analysis looked at fragmentation and biodiversity from the standpoint of how this project would effect the environment. Effects on biodiversity are disclosed in the Environmental Effects Chapter of this EA (p. 43). Fragmentation, an element in biodiversity analysis, was also evaluated (p. 118). See response to Scherübel comment #18 in Appendix C. The depth of the analysis and conclusions documented in the EA on these and other environmental factors are sufficient for the Responsible Official to make an informed decision about the impacts of alternatives.

22. The community-ecosystem analysis needs to: 1) Identify relative abundance, frequency, richness, evenness, and diversity of species and guilds; 2) Identify proportions of endemic, exotic, threatened, and endangered species; 3) Identify dominance-diversity curves, lifeform proportions, similarity coefficients, and C4:C3 plant species ratios. 4) Consider the substrate and soil variables, slope and aspect, vegetation biomass and physiognomy, foliage density and layering, horizontal patchiness, canopy openness and gap portions, abundance, density, density and distribution of key physical features (e.g., cliffs, sinkholes, and outcrops) and structural elements (snags and down logs), water and resources (most) availability, and snow cover. 5) Consider the biomass and resource productivity, herbivory, parasitism, and predation rates, colonization and local extinction rates, patch dynamics (fine scale disturbance processes), nutrient cycling rates, and human intrusion rates.

Response: Many of these parameters are components of biodiversity. Effects on soil and biodiversity are addressed in the Soils section of the Environmental Effects Chapter (p. 87 and entire Chapter III). There are no sinkholes, or karst topography in the Project Area. Biological diversity was addressed in the EA. These details were considered where appropriate to display potential effects, in sufficient detail to allow an informed decision.

23. The population-species analysis needs to: 1) Identify absolute or relative abundance, frequency, importance or cover value, biomass, and density. 2) Consider dispersion (micro-distribution), range (macro-distribution), population structure (sex and age ratio) habitat variables, and within-individual morphological variability. 3) Consider the demographic process (fertility, recruitment rate, survivorship, mortality), metapopulation dynamics, population genetics, population fluctuations, physiology, growth rate (of individuals), acclimation, and adaptation.

Response: The Forest Plan provides guidance for wildlife habitat, vegetative manipulation, special areas, and other resources with the intention of protecting, maintaining, and restoring the entire array of diverse natural communities and their successional state which are and have been a part of the project area. Techniques used in vegetative manipulation are those which mimic natural processes. By insuring that actions proposed in this project follow Forest Plan guidance, the communities which support genetic, community, and species diversity will be maintained.

Also, identification of ETS and MIS conditions and effects from the proposed action and alternatives can be found in the Wildlife and Threatened and Endangered and Sensitive Species (TES) sections (p. 98 and p. 128 of the Environmental Effects Chapter).

24. The genetic analysis needs to: 1) Identify allelic diversity and presence of rare alleles, deleterious recessive, or karyotypic variants. 2) Consider the effective population size, heterozygosity, chromosomal or phenotypic polymorphism, generation overlap, and heritability. 3) Consider inbreeding depression, outbreeding rate, rate of genetic drift, gene flow, mutation rate, and selection intensity.

Response: See response to Scherübel comment #23 in Appendix C. Genetic diversity is maintained through enhancing the diversity of natural communities which harbor native species, and by protecting ETS species as required by the Forest Plan, other laws and regulations.

25. For all state and Federal threatened and endangered (including candidate species), sensitive species, species of concern, and rare species the analysis needs to: 1) Describe the desired future condition (habitat quality, quantity, and configuration needed to support the desired population levels), 2) Disclose any known or suspected limiting factors, 3) Define suitable habitat and the status of the habitat in the project area for the species, and 4) List management recommendations which would remove or mitigate any adverse effects.

Response: The Biological Evaluation on endangered, threatened, and sensitive species is summarized in the Threatened, Endangered and Sensitive Species (TES) section of the Environmental Effects Chapter (p. 128). Many of the above concerns are addressed in that section. All alternatives are consistent with protective measures described in the Threatened and Endangered Species Amendment Environmental Assessment on the Monongahela National Forest.

26. All old growth opportunities should be evaluated independently of potential timber stands. Opportunities must be based on both landscape and structural characteristics. Any stand that meets either or both characteristics should be designated old growth. Riparian areas deserve priority for inclusion in old growth designations for watershed protection and wildlife benefits.

Response: See response to Scherübel comment #25 in Appendix C. Mature habitat needs were evaluated using a team approach using a team approach involving use of data and on the ground review by various specialists.

27. An alternative to manage this area for forest interior species (by changing its management prescription if needed) must be considered. Projects that reduce the fragmentation of the area should be considered.

Response: Alternatives 3 and 5 would reduce fragmentation. Changes to management prescriptions would be a Forest Plan level decision.

28. The analysis needs to address the predation impact of logging. The analysis needs to consider the impact of increased populations of nest predators such as blue jays, raccoons, and black snakes. The analysis needs to also consider the impact of logging roads (both providing feeding areas and a source of calcium for cowbirds) on forest interior species.

Response: The effects of forest fragmentation on forest-interior birds have been previously discussed (See comments 13 and 14). The fragmentation analysis indicates that significant, effective forest interior habitat would remain following project implementation

Effects of the proposed action and alternatives upon the wildlife resource were discussed in the Wildlife section of the Environmental Effects chapter of the EA (p. 98).

Rudnicky and Hunter, 1993 ("Avian Nest Predation in Clearcuts, Forest and Edges in a Forest-Dominated Landscape") caution about extracting data from studies conducted in suburban or agriculture landscapes where predator abundance is high. They suggest an inverse relationship between the distance from forest edges and predation rates.

Rudnick, T. C. and M. L. Hunter, Jr. 1993. Avian nest predation in clearcuts, forests, and edges in a forest-dominated landscape. *Journal Wildlife Management*. 57:358-364.

29. The analysis must cumulatively consider whether interior species can escape extinction if the project area is not protected. The issue of how forest interior species such as the woodthrush can maintain a Minimum Viable Population without protecting this area needs to be addressed. The results of the USFWS Breeding Bird Survey must also be considered.

Response: See response to Scherübel comment #25 in Appendix C. Potential effects on species designated as TES was evaluated and disclosed in the Threatened, Endangered and Sensitive Species (TES) section starting on p. 128 of the EA. No loss of viability is expected to occur for any of these species. Effects on MIS were also discussed in Management Indicator Species (MIS), starting on p. 108 of the EA.

30. The relative availability of early successional habitat of private lands needs to be considered.

Response: Effects of activities on private lands within and adjacent to the area are considered. See EA, pp. 43, 44, 61, 71, 73, 105, 118, 123, 126, 128, 132, 138, 146, 148, and 155. Many species have home ranges which are small enough that private lands are not available for use by individuals occupying National Forest lands. The Forest Plan provides for development of early successional habitat on national forest land within the particular Opportunity Area, including standards and guidelines that 5% of the area will be in openings, and no more than 8% will be in even aged regeneration cuts.

SECONDARY IMPACTS

31. The issue of secondary impacts of the project needs to be considered. There will be many secondary impacts associated with the project. All of these impacts, such as the effects of logging on the balance of interdependent species populations, must be considered.

Response: Effects on vegetation and wildlife are addressed in the Forest Type/Ecological Landtype, Forest Health and Stocking, Age Class Distribution, Other Vegetation, Aspen, Conifer, Mast, and Wildlife sections (pp. 44, 52, 56, 61, 63, 64, 65, and 98) of the Environmental Effects Chapter. They recognize that a management method, including no action, which creates habitat for one species may remove habitat for another.

32. The impacts of increased deer on other species needs to be considered. The deer could eat endangered plants. On-going research in Wisconsin indicates deer overpopulation may be contributing to the oak decline problem. Deer apparently eat the oaks and leave the sugar maple.

Response: See response to your next comment.

33. The impact of increased deer should be considered. For example: 1) Deer consume or otherwise damage agricultural crops. The value of these crops should be determined and considered. 2) More deer means a higher likelihood of deer/vehicle collision. The economic

losses, i.e. damage to cars, lost work time, and medical bills needs to be considered. 3) Deer can also overbrowse an area. This impact needs to be considered.

Response: The Forest is working with the West Virginia Division of Natural Resources (WVDNR) on an area-by-area basis to address deer herd densities (e.g. encouraging hunting in certain areas to reduce deer browsing of regenerated stands). An increase in deer-vehicle collisions is not likely to result from implementing proposed activities if deer herds are maintained and since all newly constructed roads would be closed to public, motorized-vehicle use. Also, see the discussion on deer browsing (pp. 46, 49, 100, and 108-109) in the Forest Type/Ecological Landtype, Wildlife, and Management Indicator Species (MIS) sections of the Environmental Effects Chapter.

34. The issue of the impact of songbird declines on forest growth needs to be addressed. Research in southern Missouri shows that neotropical songbirds increase oak growth by consuming leaf-chewing insects. This study found that oaks have an enormous decline in biomass production when songbirds are kept away. The Study concluded: Our results imply the declining populations of many neotropical migrant insectivorous bird species may result in decreased forest productivity. Where such population declines in certain bird species have been documented, they have not been offset by increases in populations of other insectivorous bird species. ...Our research suggests that forest management practices that promote the conservation of insectivorous birds are imperative to maintain forest productivity. Such management practices would emphasize strategies that maximize bird species diversity and the viability of their populations.

Marquis, Robert J. and Christopher J. Whelan, "Insectivorous Birds Increase Growth of White Oak Through Consumption of Leaf-Chewing Insects" *Ecology*, 75(7), 1994, pp. 2007-2014.

Response: Bird species diversity and the viability of populations of these and other insectivorous species were considered as documented in the Wildlife, TES, and Fragmentation sections of the EA. Management direction for the area focuses providing for edge species while protecting sufficient interior habitat. Since no significant declines in insectivorous birds are expected any forest health effects of such declines were not evaluated.

35. The issue of the impacts of roads needs to be addressed. The analysis needs to address the impacts of increased mortality due to road kills. The analysis needs to address the impacts from fragmentation and isolation of species with an aversion to roads.

Response: This issue was considered under wildlife effects of the proposed action (EA. pp. 99, 101). These effects were determined to have no significant direct, indirect, or cumulative effects on wildlife populations or viability.

36. The issue of the effects the project will have on other stands in times with high wind needs to be addressed. The analysis needs to address if the openings will funnel the wind to other trees that will result in blowdown. By the same token, the analysis needs to address if the trees left standing can survive high winds.

Response: Thinning, while reducing the density of stands does not create large openings that would funnel wind and increase the risk of extensive wind damage. Although the openings that

would be created by clearcuts and wildlife openings could increase the risk of wind damage in adjacent stands, observations on the Gauley Ranger District in 1998 did not suggest that thinned stands or those stands adjacent to clearcuts sustained higher amounts of wind damage when compared to other areas of the forest. The year 1998 had several high wind events on the Gauley Ranger District. Scattered blowdown and windthrow has been observed in several areas across the district, including some within the project area, but the damage has been randomly scattered with no pattern of being more prevalent near clearcut or thinned areas. Isolated trees within openings, however, do seem to be more susceptible to wind damage.

IMPACTS ON PLANTS & ANIMALS IN THE SALE AREA

37. The Forest Service misrepresents its project by using sanitized language, such as “harvest,” to describe the proposed action. The reality of a timber sale is that the Forest Service kills thousands of creatures and many of these creatures suffer long and agonizing deaths.

Response: Comment noted. Effects on wildlife are addressed in the Wildlife section (p. 98) of the Environmental Effects Chapter.

38. The analysis needs to disclose the true impact of the Forest Service converting our natural heritage into devastated stumpland.

Response: See response to Scherübel comment #32 in Appendix C.

39. The Forest Service always claims that early successional species require the devastation of Forest Service timber sales. The Forest Service, however, neither provides any proof nor evidence of this claimed need or addresses the impacts to the species currently living in the area.

Response: See response to Scherübel comment #33 in Appendix C.

40. The analysis needs to disclose the impacts to the plants and animals currently living in the project area. For example, scientists estimate the Forest Service kills 250 million songbirds a year, many of whose population is declining. Most killed are defenseless nestlings. The Forest Service kills many other species when it cuts the sale. The analysis needs to estimate the number of each different species that will be killed when the sale is cut. The population trend of each species that will be killed needs to be disclosed. For species with a downward population trend, the analysis needs to disclose how killing all these creates will impact the trend. Population trends must be calculated from site-specific inventory and monitoring data, not computer models.

Response: Impacts to plants and animals within the project area are disclosed throughout the Effects Section. See response to Scherübel comment #34 in Appendix C.

41. The analysis also needs to disclose what kind of death these defenseless creatures will suffer. Will they be instantly killed when the trees are cut or when they are ran over by logging

equipment? Or will they suffer a slow and agonizing death from starvation, exposure, or dehydration? The analysis also needs to estimate how long the creatures will suffer before they die.

Response: Effects on wildlife are addressed in the Wildlife section (p. 98) of the Environmental Effects Chapter. Mitigations to minimize harm to animals are listed in Chapter II (mitigations starting on page 19 and listed for each alternative in Chapter II). See response to Scherübel comment #35 in Appendix C.

42. The Forest Service needs to develop alternatives and mitigation measures to minimize the death and suffering the logging causes. For example, the alternative/mitigation measure of not cutting in the nesting season needs to be developed and considered.

Response: See response to previous comment. There is a mitigation of restricting bulldozing for wildlife openings to between July 15 and October 15 (EA. pp. 22, 27, 33, 38).

43. The analysis also needs to disclose the indirect impacts to the species that are not directly killed by the trees being cut down or run over by logging equipment. The analysis needs to disclose how many additional plants and animals will die because of the major and sudden modification to their habitat. The analysis needs to disclose what kind of death these creatures will suffer. Will it be a quick and painless death? Or will the creatures suffer a long and agonizing death from starvation, dehydration, or exposure. The analysis needs to disclose how long these creatures will suffer before they die. The Forest Service needs to develop mitigation measures/alternatives to minimize the deaths and suffering. If the Forest Service claims that some of these species will just go some place else, the Forest Service needs to provide proof of this. For example, the Forest Service would need to provide site-specific data showing other areas are not already occupied by other members of the species.

The analysis needs to address the humane and anti-cruelty laws. The analysis needs to disclose each law and indicate whether it would apply to a timber sale. (Please discuss both the Forest Service's and loggers compliance with the law.) Even if the Forest Service claims the laws do not apply to their logging, please disclose if all the animals in the sale area are being treated in the manner that would be considered humane under the laws.

In the Response to Comments, please explain why you believe killing and causing pain and suffering to forest creatures is justified so that you can get the cut out.

Response: See response to Scherübel comment #37 in Appendix C. Indirect effects on plants and animals are discussed throughout the effects section.

MIGRATORY BIRD TREATY ACT

44. While the USFWS says it is not a criminal violation of the MBTA for the Forest Service to approve a timber sale, the USFWS says it is a crime for the loggers to kill birds. For example, the USFWS has stated: Federal Agencies are required to ensure that their decisions comply with the Migratory Bird Treaty Act (MBTA) (16 U.S. C. 703-712; Ch. 128; July 13, 1918; 40 Stat 755, as

amended). The MBTA prohibits the take of migratory birds, nests, eggs and nestlings. The Federal list of migratory birds (50CRF10 April 15, 1985) includes nearly every native bird species found in the State of Idaho, including Northern flicker. The DEIS does not accurately represent MBTA requirements. The FEIS should reflect the analysis below.

The DEIS states: "Trees with unidentified but occupied nest may be felled during logging or thinning activities, destroying the nests. ... The proposed management activities comply with the MBTA." The MBTA prohibits the direct take of migratory birds, nestlings and eggs by persons. Actions undertaken by contractors of the Forest Service that include cutting occupied trees, resulting in the death of migratory birds, nestlings or eggs, are not in compliance with the MBTA. However, federal agencies are not considered "persons" under the MBTA, and federal employees are not liable for taking migratory birds while performing their official duties for federal actions within the authority of the federal agency. For instance, prescribed burn actions implemented by Forest personnel are in compliance with the MBTA, even if such actions result in the take of migratory birds, nestlings or eggs.

In this case, however, contractors felling trees with nestlings or eggs would result in take of migratory birds, and persons that cut such trees are liable under the MBTA. If actions were done in the winter, or other times when nests are not occupied by nestlings or eggs, the action would be in compliance with the MBTA, because the MBTA addresses only direct take, but does not address habitat loss.

The Service recommends the FEIS include project design, timing and implementation requirements to protect migratory birds and their habitats, and correctly describe liability associated with the take of birds, nestlings and eggs. USFWS comments on the proposed Deadwood timber sale on the Boise NF.

The analysis needs to address this and develop mitigation measures to assure the loggers will not violate the MBTA.

Response: See response to Scherübel comment #38 in Appendix C. Although harmful effects on individual animals including birds may occur with any of the alternatives including no action, these effects were not determined to be significant in the Effects section of the EA.

BASELINE DATA

45. Before carrying out the project, the Forest Service needs to obtain baseline data for all MIS species, forest interior birds, and reptiles and amphibians. This needs to be done with field surveys. See *Sierra Club v. Glickman*, 974 F.Supp. 905 (E.D.Tex. 1997). Survey methodologies must be disclosed.

Response: Pertinent direct, indirect and cumulative effects were disclosed in the Effects section of the EA. The expected effects were determined using extensive field collected data sources and research results. See response to Scherübel comment #39 in Appendix C. MIS are addressed in the EA, starting on p. 108.

46. An adequate monitoring plan also needs to be in place. The Forest Service needs to conduct plant and animal surveys in all seasons.

The analysis needs to disclose all the site-specific data that is being used for this project. For all the data, the analysis should reveal when it was gathered, who gathered it (including their qualifications) and the methodologies used. We have been on many Forest Service tours of proposed timber sales when the Forest Service could not find the site. Thus, we are concerned that the people who gathered the data for the project area may have been in the wrong place and not known it. The analysis needs to disclose the technology used to determine the location when the site-specific data was gathered and provide proof that the data is for the correct area.

Response: See response to Scherübel comment #40 in Appendix C. Data used for this analysis and for monitoring was collected using current and historic methodologies considered appropriate for the purposes of the analysis and within budgetary limits. A monitoring plan has been prepared for the project area.

47. The population trends of threatened, endangered, sensitive species, and MIS needs to be disclosed for the Ranger District, Forest and Region. The trends of threats to these species in each Ranger District, Forest and Region needs to be disclosed.

The analysis needs to disclose and consider all the monitoring data that has been conducted in the project area. If there has been no monitoring done in the project area, the Forest Service should not be proposing any projects until it obtains monitoring data for the area. If there is no monitoring data for the area, the analysis needs to explain why the NFMA and NEPA's monitoring requirements are not being followed. Computer model projections cannot replace field monitoring and surveys.

Response: The effects that this proposed action and alternatives may have on threatened, endangered, and sensitive species and MIS in the Project Area were disclosed in the Environmental Effects Chapter of the EA (pp. 128 and 108), which determined that no significant effects are expected.

Also, see response to your comment #20 and response to Scherübel comment #39 in Appendix C.

PHYSICAL ENVIRONMENT

48. The issue of carbon holding capacity needs to be addressed. An older forest holds more carbon than a young forest. (Mark E., William K. Ferrell, Jerry F. Franklin, ³Effects on Carbon Storage of Conversion of Old-Growth Forests to Young Forests.² Science, Vol. 247, 9 February 1990, pp. 699-70.)

Response: See response to Scherübel comment #42 in Appendix C. This issue was considered commensurate with the scale of expected effects from the project.

49. The issue of the impact of increased nitrates needs to be addressed. As forests are forced to absorb ever higher levels of nitrates from the atmosphere, their systems become saturated. When forest disturbances occur (fires, logging, etc.) these nitrate levels are released into streams and into the air as gaseous nitrates. High levels of nitrates in the soil can lead to cation loss, acidification, with obvious long-term forest health implications.

Response: See response to Scherübel comment #43 in Appendix C and the Soils section (p. 87) of the EA, which discusses the expected subtle and complex interactions of the project with existing conditions. Mitigations for such effects are discussed in Chapter II.

50. The issue of the impacts to soil and water quality needs to be addressed. The effects of soil compaction and vegetation/nutrient removal must be considered.

Response: Compaction and nutrient removal are addressed in the Soils section (p. 87) of the Environmental Effects Chapter

51. The analysis needs to address the impacts of decreased water quality due to increasing rates of soil erosion and mass wasting events. The effects of sedimentation, nutrient removal, and increased temperatures resulting from logging must be considered. The analysis needs to address the cumulative impacts on aquatic communities, including fisheries.

Response: Effects on water quality, streams, and fisheries are addressed in Watershed and Fisheries sections (p. 69, p. 107) of the Environmental Effects Chapter. Some short-term soil temperature changes will occur, especially on new roads and clearcuts, but they are not expected to cause a decrease in long-term soil productivity of the soils in the Project Area.

52. Some of the factors which need to be considered in the analysis of the cumulative effects include: 1) coarse particulates organic matter, 2) fine particulate matter, 3) algal abundance, 4) temperature extremes, 5) turbidity, 6) diurnal cycle of dissolved oxygen, 7) nutrient input into the stream, 8) amount of suspended solids, 9) stability of substrate and banks, 10) uniformity of water depth, 11) habitat heterogeneity, 12) flow extremes, 13) diversity of microhabitat velocities, 14) primary and secondary production, 15) abundance of shredders versus scrapers, 16) abundance of omnivores versus piscivores.

Response: The effects on soil and water quality are addressed in Soils and Watershed sections (p. 87 and p. 69) of the Environmental Effects Chapter. Potential impacts to rare species are addressed in the TES section of the Environmental Effects Chapter. The intent of environmental analyses is to address the site specific concerns with a particular proposed action. It is not intended for us to address Forest-wide or region-wide issues or every conceivable effect. Instead, we are to discuss the pertinent, direct, indirect, and cumulative effects of this proposal. The EA provides sufficient information for such a disclosure.

53. The analysis needs to identify all site-specific “Best Management Practices” for controlling non-point source pollution. The analysis needs to identify and consider any water quality monitoring done to demonstrate the adequacy of the Best Management Practices.

Response: Riparian mitigation measures applied in this project area, as well as Forest Plan standards and guidelines exceed the West Virginia Best Management Practices. Erosion prevention is incorporated into all earth disturbing activities and covered in the Forest Plan standards and guidelines, timber sale contracts, and special use permits. Monitoring conducted during timber sale administration verifies that implementing these measures correctly is adequate to control non-point source pollution.

Effects on water quality, streams, and fisheries are addressed in Watershed section (p. 69) and the Fisheries section (p. 107) of the Environmental Effects Chapter. Some short-term soil temperature changes will occur (EA. pp. 92, 96), especially on new roads and clearcuts, but they are not expected to cause a decrease in long-term soil productivity of the soils in the Project Area.

54. The issue of all cumulative threats to water quality, including logging, illegal dumping, oil and gas leasing, wildlife openings upstream of the project area must be addressed. The analysis needs to identify all these threats. The analysis needs to identify and protect all riparian areas, wetlands, and floodplains.

Response: Effects on water quality and riparian areas are addressed in the Watershed section (p. 69) of the Environmental Effects Chapter.

55. The issue of the nutritional value of the plants growing in the resulting openings needs to be addressed. Research in the Pacific Northwest and Alaska indicates that the nutritional value of plants in open areas, such as a clear-cuts, is significantly less than in a forest. Preliminary results from research being conducted on the Daniel Boone National Forest in Kentucky show the same thing for all forms of logging.

Response: See response to Scherübel comment #49 in Appendix C. Since openings often support a large amount of herbs and forbs, the potential loss in nutritional value of plants in those openings would be mitigated by the quantity and diversity of plants available.

CAVES, SPRINGS, & GROUNDWATER

56. Timber sales increase water flow and sediment. Caves and springs many miles away can be adversely affected by logging 20 or more miles away and in different watersheds. For example, a timber sale could result in increased water entering a cave and in a major storm event, the increased water could result in a flood large enough to kill (i.e., drown) or harm creatures in the cave. Or it could kill someone exploring the cave. It could also adversely affect or kill creatures living in a cave or a spring by changing the temperature or increasing sediment. Thus, the analysis of effects must also consider groundwater and subsurface water flow.

Response: See response to Scherübel comment #50 in Appendix C.

Limestone rock units and karst do not occur within or have hydrologic connections to the Desert Branch project area.

ROADS

57. The analysis needs to determine if there are any roads in the project area that are not included in the Forest Transportation Plan inventory. If any roads are not in the inventory, they need to be permanently closed to the motorized travel by using permanent physical obstructions and by ripping, recontouring, and revegetating the road bed and prism. The Forest Service needs to determine if the number of open roads in the project area exceeds Forest Plan standards. If the standards are exceeded, the roads need to be permanently closed. If any road in the project area is already subject to a closure order, a site inspection needs to be conducted to determine if motorized use of the road is occurring. If such use is occurring, the Forest Service needs to block the traffic with physical barriers and ripping, recontouring, and revegetating the road. Law enforcement must be employed to ensure appropriate compliance.

Response: Roads within the area are addressed in the Transportation section (p. 151) of the Environmental Effects Chapter of the EA. The few non-system roads were closed historically and are not in use by vehicles, as determined during the analysis.

58. The analysis needs to disclose the conditions and weight limits of all the roads and bridges that will be used to haul trees to the main roads. The analysis needs to disclose if any of these roads or bridges will need to be upgraded or repaired in order to carry out this project. The analysis also needs to disclose the amount of damage the logging trucks will do to existing roads and bridges, and the cumulative direct and indirect effects the transportation of logs will have on local residents and landowners.

Response: An engineering survey has been done on roads and bridges to be used for hauling. A roads analysis has been completed for the Forest and the projects. See response to Swearingen comments # 2, 3, 6, and 7, and the Transportation section of the EA.

INVERTEBRATES & MICRO ORGANISMS

59. The issue of impacts to the microorganisms such as fungi and bacteria in the soil needs to be addressed. Logging will kill off many of these. An inventory of these organisms needs to be done so the impacts could be determined. The impacts of compaction, vegetation removal and erosion must be considered.

Response: See response to Scherübel comment #53 in Appendix C. Effects of harvest on soil are addressed in the Soils section (p. 87) of the Environmental Effects Chapter. Even the most dramatic logging-related soil effects on roads and landings do not represent an irretrievable commitment of resources.

DEAD & DECAYING WOOD

60. Forest Service research indicates dead and decaying wood accounts for about 25% of a forest's biodiversity. (Maser, Chris, James M. Trappe "The Seen and Unseen World of the Fallen Tree." General Technical Report PNW-164.) The impacts of removing trees on this component of the

forest ecosystem needs to be considered. The Forest Service generally contends that trees are somehow wasted when they die. If the trees die, they need to be allowed to fulfill their function and be recycled back into the ecosystem. The no-action alternative needs to consider these values. According to the Forest Service:

"Wildlife and fish need dead, hollow or fallen trees for food and family homes. Nationwide over 149 species of birds, 73 species of mammals, 93 species of amphibians and reptiles and nearly all fish use (dead trees) for food, nesting, or shelter. Only 31 bird species can make their own nest cavities in trees. Another 54 species of birds and other animals also use these holes. Loose bark on dead trees provides roosting colony sites for bats. Up to 167 pygmy nut-hatches have been known to roost simultaneously in a tree hole. Many species of turtles bask on fallen trees in or near water. Rhythmic drumming on dead trees is a ritual woodpeckers use to attract a mate. Ants living in dead wood eat thousands of forest insect pests which can harm living trees. Bass and trout hide under trees that have fallen into the water. The forest neighborhood continually changes and yet the way animals, plants, and people depend on each other remains the same. Even as a tree dies, it continues to give life to animal families and eventually to new trees and other plants, and the cycle begins again." US GPO 1990-0-792-461

Reponse: The Forest Service recognizes the importance of this down woody debris as part of forest diversity. At the Forest level, the retention of dead and down logs and other ground material was provided for through various *Forest Plan* guidelines: (1) retention of five percent of the National Forest lands as mature habitat; and (2) maintenance of three to five snags and cull trees per acre (Forest Plan, p. 136). At the project level, several tons per acre (averaging five to thirty tons/acre depending on the type of cut) of tops, branches, and slash material will be left on the forest floor after logging is completed. Also, riparian mitigation measures identified in Chapter II (pp. 21-22 and 26) and Appendix B will help ensure down woody debris is maintained in the area.

Forest Plan standards and guidelines and project level mitigations in Chapter II provide for cull trees and snags (see EA, pp. 20).

61. The analysis needs to disclose how many standing and fallen dead trees would there be in a healthy natural forest of this size and the current status of this habitat component. The analysis needs to disclose the effects of the proposal on this important habitat.

Response: Plot data indicates that the number of standing dead trees varies from one stand to another. Some stands have few snags per acre while others may have many. The quantity of fallen dead trees was observed during specialist's field visits to the area, and was considered and described in the EA to the extent considered necessary. Logging operations generate some slash, which will provide some woody debris. Also see response to your comment #60. This issue is discussed in the Effects section as a component of forest health. Mitigations regarding snags, or standing dead trees are also included in Chapter II.

FISH & WILDLIFE

62. Reptile and amphibian populations have been dropping dramatically throughout the world. The effects to these species needs to be evaluated. Baseline data needs to be gathered for the entire

project area. A monitoring plan needs to be developed. Research indicates logging devastates salamander populations. (Petranka, James W., Matthew E. Eldridge, and Katherine E. Haley, "Effects of Timber Harvesting on Southern Appalachian Salamanders." Conservation Biology; Laura A. Herbeck, Larsen, David R. "Plethodontid salamander response to silvicultural practices in Missouri Ozark forests" Conservation Biology June 1999; Man Tech Environmental Research Services Corp., Corvallis, OR, "An Ecosystem Approach to Salmonid Conservation" www.pond.net/~kris/Mantec.htm; Recovery of Wild Salmonids in Western Oregon Forests: Oregon Forest Practices Act Rules and the Measures in the Oregon Plan for Salmon and Watersheds Technical Report 1999; Independent Multidisciplinary Science Team (Can be downloaded at www.forestscience.org/.) This research needs to be considered.

Response: There is no requirement to analyze every known species of plant or animal in the planning area. (See response to your comment #45.)

The effects the proposed action and alternatives may have upon wildlife populations, including amphibians, are addressed in the Wildlife section (p. 98) and in the Threatened, Endangered and Sensitive Species (TES) section (p. 128) of the Environmental Effects Chapter of the EA. Effects on salamanders are addressed on pages 100 and 106. See response to Scherübel comment #54 in Appendix C.

63. The analysis needs to address the status of native fisheries & mussels and stream habitat quality compared with historic conditions in the project area, forest and region-wide. The analysis needs to disclose the population trends of exotic or introduced species relative to native fisheries and mussels in the project area. The impacts the project will have on these populations needs to be addressed.

These studies needs to be addressed:

Warren, Melvin. & Brooks M. Burr, "Status of Freshwater Fishes of the United States, "Fisheries, Vol. 19, No. 1 January 1994.

Williams, James D. Melvin L. Warren, Jr., Kevin S. Cummings, John L. Harris, and Richard J. Neves, "Conservation Status of Freshwater Mussels of the United States and Canada, "Fisheries, Vol. 18 No. 9 September 1993.

Response: Stream habitat conditions are discussed throughout the EA for native and stocked fish species (EA p. 107). Aquatic habitat is discussed relative to sensitive species (EA, pp. 133-136). No significant effects on the North Fork of Cherry were discerned in the analysis, nor were any significant effects on aquatic species expected.

UNIQUE PLANT COMMUNITIES

64. The analysis needs to identify and the Forest Service needs to protect all unique plant communities. Plant communities needs to be identified based on the species present. Plant groups

which need to be identified and protected include 1) all threatened and endangered species under consideration for this status, 2) all state listed species, 3) and all sensitive species.

Response: See responses to Sherübel comments #6, #20, and #24. No significant effects to such species likely to occur within the project area were expected.

65. The analysis needs to address the issue of timber theft. A report by the Agriculture Department's Inspector General charges that the US Forest Service often overlooks the theft of timber from our National Forests by failing to follow its own policies intended to prevent timber companies from illegally cutting trees and penalize those who do. The report shows that out of a sample group of 61 timber sales over the last two fiscal years, 26 operations had cut trees that had not been included in the sale site. Out of these 26 violations, Forest Service administrators informed the USFS enforcement personnel of only six violations. Additionally, a report by Forest Service employees for PEER ("Unindicted Co-Conspirator) contains additional proof. Therefore, analysis needs to consider these reports and address the impacts timber theft could have.

Response: Sale administration reduces the risk and opportunity for theft. See response to Scherübel comment #58 in Appendix C.

66. "The Forest Service lost a lawsuit on a similar issue: ATV use on the Shawnee National Forest. In the Forest Plan EIS, the Forest Service claimed that there would not likely be any significant impacts from ATV/ORV use on the Shawnee National Forest. The basis for this claim was that there would be designated trails for ORV/ATV use. The Forest Service, however, failed to address the problems with keeping the ATV/ORVs on the trails. There was evidence of law enforcement problems on the Shawnee and other nearby areas. The record indicated that it was unlikely that the ATV/ORV riders would obey the law and stay on the trails. In *Sierra Club v. U.S.D.A.*, 1997 WL 295308 (So. Dist. Ill. September 25, 1995) aff'd by order adopting opinion 116 F. 3d 1482 (C.A. 7 (Ill),. 1997), the Court vacated the Forest Plan, EIS, and ROD. Subsequently, the Court issued a permanent injunction enjoining all ATV/ORV use on the Shawnee National Forest. In *Sierra Club v. U.S.D.A.*, 1997 WL 295308 (So. Dist. Ill. March 20, 1996) aff'd by order adopting opinion 116 F. 3d 1482 (C.A. 7 (Ill),. 1997). The Court ruled that the Forest Service was required to analyze the impacts of the ATV/ORVs violating the law by going off the trails. Similarly, the Forest Service needs to analyze the effects of timber theft."

Response: Potential for illegal ATV use within the area was discussed under Economics and Social effects; such use is expected to remain at a low level.

NEED FOR THE SALE

67. The issue of the need to cut timber from the sale area to meet society's needs for timber must be addressed. The alternative of private lands providing the timber needs to be considered. The issue of the impacts of local landowners having to compete with below-cost government timber needs to be considered. In a hearing for *Kentucky Heartwood v. United States Forest Service*, Civil # 97-378 (E. D. KY, April 15, 1998), the timber industry put on witnesses who testified that the price of timber on private land had increased due to the reduction in logging on the Daniel

Boone National Forest. The indirect effect of the unfair government competition triggering poor private forest management needs to be analyzed.

The state's private forests can easily provide all of our timber needs. On a state and regional basis, the National Forest contributes an insignificant portion of the timber production.

Response: The purpose and need section (p. 6) of the EA describes the need for proposed action under the terms of the current Forest Plan. See response to Scherübel comment #60 in Appendix C.

68. The best use of the area needs to be considered. The primary use of hardwoods from the Forest is pallets. The pallets are used only once and usually end up in a landfill. Pallets can be made from recycled plastic. There is a company in Missouri that makes pallets that can be reused 15-20 times. The analysis needs to compare the relative value of this area as a tree farm to make pallets that clog our landfills to wildlife habitat and recreation land. Such an analysis is needed to address the issue of what is the best use of this area.

Response: See response to Scherübel comment #61 in Appendix C. Pallets are an incidental use of some wood cut from the area, but market forces determine which products will be produced from harvested wood.

69. The Forest Service needs to consider and implement its "National Strategy for Waste Prevention and Recycling". The analysis needs to consider how this timber sale will promote waste of wood and fiber. The Forest Service cannot bury its head in the sand and say this is beyond the scope of the analysis. The Forest Service has a legal responsibility to provide leadership to Waste reduction efforts. Ignoring the impacts of providing cheap, particularly below-cost, trees on reduction efforts is not providing leadership.

The indirect effects of filling up landfills with pallets, wood products, and paper (which are acknowledged in the National Strategy for Waste Prevention and Recycling) must be considered. An alternative of using reusable pallets or pallets made from recycled plastic needs to be considered. This alternative would respond to the issue of whether there is a need to cut this area and what the best use of the area is. An alternative of increasing the use of recycled paper also must be considered for the same reasons. The NFMA states: "recycled timber product materials are as much a part of our renewable forest resources as are the trees from which they originally came, and in order to extend our timber and timber fiber resources and reduce pressures for timber production from Federal lands, the Forest Service should expand its research in the use of recycled and waste timber product materials, develop techniques for the substitution of these secondary materials for primary materials, and promote and encourage the use of recycled timber product materials." (16 USC § 1600)

The Forest Service should follow its mandate to provide a leadership role in waste reduction by printing all documents on both sides and using either alternative fiber or 100% post-consumer recycled paper.

Response: See response to Scherübel comment #62 in Appendix C.

70. The issue of exports needs to be considered. Trees cut down east of the Mississippi can be exported to foreign countries. An alternative of banning exports needs to be considered.

Response: There is no direction from NFMA to consider the banning of timber exports, especially in project-level decisions on the Monongahela National Forest. This is a national issue that can only be addressed by Congress.

RECREATION

71. According to the Explanatory Notes for the 1997 Forest Service Budget: 1) In FY 1994 the Forest Service hosted over 835 million visits on National Forests, compared to 300 million by the National Park Service and 40 Million by Disney; 2) Recreational use of the forests is at an all time high, and RPA projections indicate that use will increase over 50 percent by 2040; 3) Over 2 million jobs are associated with the economic activity generated by recreation which is estimated to almost \$100 billion annually; and 4) Recreation fees to the Treasury were \$46 million last year. The timber program, by comparison, created 76 thousand jobs worth \$2.7 billion (National Summary Timber Sale Program Annual Report Fiscal Year 1994.) and cost the treasury \$278 million in 1994. (Forest Service Distribution of Timber Sale Receipts Fiscal Years 1992-94, General Accounting Office Report #GAO/RCED-95-237FS, September 1995.).

A survey in the September 1996 issue of Conde Nast Traveler magazine readers says that the environment has become a major issue for many travelers. More than half of the respondents (218 readers responded) said that the environment has become a factor in their travel plans over the last ten years. Ninety-one percent expressed concerns over environmental conditions at their destinations, and 25% said they had been forced to change travel plans because of environmental problems. Almost 42% said they would have changed plans had they known in advance about problems they encountered. The analysis needs to consider this survey.

The issue of impacts on recreation needs to be considered. The Forest Service should consider how the project, including the cumulative impact of other logging operations, will impact the increased recreational use of the forest in the future. The project will impact recreation well into the future. The cut area will not be attractive for recreation such as hiking, camping, bird watching, fishing, and solitude. The analysis needs to consider and disclose these adverse effects. The analysis needs to compare the ability of private lands to provide recreation and timber versus the National Forest's ability to provide such services. The Forest service needs to disclose the jobs and income from recreation whenever it mentions the jobs and income created by logging.

Response: In all alternatives, there will be opportunities for dispersed recreation and no developed recreation sites would be affected. Effects on recreation are addressed in the Recreation and Visual Quality section (pp. 141-146) of the Environmental Effects Chapter. Temporary closure of the area, including the Fork Mountain Trail section within the OA, would be necessary during helicopter logging. In addition, use of the Desert Branch Road by hikers would not be permitted during periods of helicopter logging, and would be discouraged by log truck traffic during times of hauling. Other than these factors, no adverse effects to recreational use of visual quality are expected. Also see pages 159-160 in the economics discussion.

Also, see response to Scherübel comment #64 in Appendix C.

ECONOMIC IMPACTS

72. The issue of below cost sales needs to be addressed. Since this will be a below cost sale, the issue of the indirect effect of increasing the Federal deficit needs to be addressed. All environmental impacts of a larger Federal deficit need to be considered.

Response: The EA displayed the projected costs and revenues of a timber sale in sufficient detail for the Deciding Officer to make an informed decision. Since the economic differences in the alternatives were incremental, the analysis included only variable costs. Both the Proposed Action and the preferred alternative (6) are expected to have positive net revenue (EA, p. 158).

73. The 6th Circuit ruled that the Forest Service has a tendency to act in its own fiscal interest instead of the public interest. See, *Sierra Club v. Thomas*, 105 F.3d 248 (6th Cir. January 21, 1997). The 6th Circuit explained that the Forest Service increases its budget by approving timber sales. The analysis needs to disclose how much of the money the logging corporation pays for our forests will be returned to the U.S. Treasury and how much will be diverted for other purposes (KV fund, etc.).

Response: The responsible line officer determines the scope, appropriate level, and complexity of economic and social analysis needed (Forest Service Manual 1970.6). The detail of the economic analysis in this EA is sufficient for the Responsible Official to make an informed decision. Table 17 (p. 158) of the EA contains an estimate of what the logging corporation would pay for the trees removed under “Total Revenues”. To determine how much would be returned to the Treasury, subtract the estimated values found under the Total Costs from the Total Revenues. The Amount to Counties Fund is paid from the Treasury after National Forest receipts are received. Also see response to Scherübel comment #2 in Appendix C.

74. Research by the Association of Forest Service Employees for Environmental Ethics reveals that the Forest Service illegally skimmed \$74 million a year from KV funds (up to 72% of the KV fund expenditures) earmarked for reforestation and logging mitigation for administrative overhead including office and staff expenses and the salaries of regional foresters and supervisors. Since this provides a perverse incentive to get the cut out, the analysis needs to disclose how much of the income from the sale will go to pay the Deciding Officer’s and other Forest Service employee’s salaries and other administrative overhead. The no-action alternative needs to disclose its impact on Forest Service employment levels.

Response: In a case concerning KV funds (*FSEEE v. U.S. Forest Service*) in the U.S. District Court for the Northern District of California, the court found in favor of the Forest Service in a ruling issued on January 4, 1999. The court found that the Forest Service had “not acted arbitrarily or capriciously in appropriating funds from the K-V Act to cover indirect costs associated with implementing projects undertaken pursuant to the Act”. and that “K-V funds may be collected as

part of the stumpage payments for timber” and K-V deposits need not be collected separately from the payments for timber as asserted in the FSEEE claim.

Also see response to previous comment and response to Scherübel comment #2 of May 18, 2001 in Disposition of Issues from Scoping.

75. The Forest Service needs to include all costs in the EA and its calculations. The following actual costs need to be included: Road Costs (Construction, Reconstruction, and Wear and Tear); County Payment; Land Survey; Sale Costs-Harvest Administration, Sale Preparation, Planning, and Silvicultural Exam; Management Costs-Reforestation and Timber Stand Improvement; General Administration and Building Depreciation; Washington and Regional Office Overhead; Law Enforcement. The analysis needs also to consider wear and tear on non-Forest Service roads. The Forest Service points out that road construction costs are depreciated because they are usually used for more than one sale. Thus, this sale’s share of construction costs for all roads that will be used need to be calculated and charged against this sale.

Response: We discuss the economic analysis of the proposed action and other alternatives in the EA. The economic differences in the alternatives were incremental; therefore the analysis included only variable costs. The economic effects of the alternatives were considered in this analysis. We have included sufficient information in the economic analysis section of the environmental assessment for the deciding officer to make an informed decision.

The full costs of constructing and reconstructing roads in the project area were estimated in the EA. However, roads are a capital investment which have a useful life well beyond the current year or current sale; a road constructed this fiscal year may serve several sales during its useful life. Additional road maintenance costs on Forest Service system roads attributable to wear and tear from timber sale operations are covered by per-mile use deposits made by the timber purchaser. Wear and tear on non-Forest Service roads is covered by use-taxes to the counties, an issue outside the scope of the project-level analysis.

Sale expenses such as sale planning and silvicultural exam are included as costs of the timber sale program. Washington and Regional Office overhead and law enforcement are included as costs at the Regional and National program levels, not at the sale level. Land line location is a basic cost of land stewardship and is not, therefore, considered as a cost specific to the timber sale program. Payments to counties is not a cost to the timber sale program.

76. The Forest Service needs to addresses all the economic trade-offs and all the environmental externalities from the timber sale. The Forest Service needs to conduct an analysis that addresses the points of the Forest Service publication: “Assessing Economic Tradeoffs in Forest Management” PNW-GTR-403, August 1997. The Sky Did NOT Fall-The Pacific Northwest’s Response to Logging Reductions by Ernie Niemi, Ed Whitelaw, and Andrew Johnston which can be downloaded at www.pacrivers.org/Publications/skyfalling.html needs to be considered.

Response: The Economics section on pages 156-160 of the EA displays the economic analysis for the Desert Branch area. As directed by the National Environmental Policy Act, this section focuses on the incremental economic differences between the alternatives. The EA displayed the projected

costs and revenues of a timber sale in sufficient detail for the Deciding Officer to make an informed decision.

77. In September 1995, the General Accounting Office released “Forest Service Distribution of Timber Sale Receipts Fiscal Years 1992-94”, GOA/RCED-95-237FS. This report found that the Forest Service lost about one billion dollars logging the public’s National Forests. The analysis needs to address the findings of the report and calculate the costs of the sales in the same manner.

Response: See responses to your comment #72. Twenty-five percent of the timber receipts are returned to the counties in which the forest is located. This money is designated for roads and schools.

78. Forest Service economic analysis never assigns any value to standing forests. This is like selling a car worth \$10,000 for \$100 and claiming a \$95 profit because the classified ad cost \$5. The economic analysis needs to consider economic values such as carbon storage, watershed protection, tourism, recreation, mushroom and other forest products gathering of a standing forest and compare it to the economic value of stumpland for these factors.

Response: Thinning areas retain forest cover and are still able to provide the values mentioned in the comment. Clearcut areas temporarily have their value for some of these resources reduced, but they regain these values as they regenerate and may provide some resources or opportunities not found in sawtimber stands. Also see Economics section on pages 156-160 of the EA.

GRAPHICS

79. “The analysis should include graphics to help the Decision maker and public understand the effects of the action. The analysis should include graphics that show the following for the project area: 1) Past logging sites; 2) Timberland suitability; 3) Old growth; 4) Interior Forest; 5) Existing roads; 6) Road density; 7) Vegetation type; 8) Soil type; 9) Topographic information, showing slope steepness; 10) Unstable or potentially mass wasting slopes; 11) Management area prescriptions; 12) Cliffs, waterfalls, talus fields, etc.; 13) Snag density; 14) Wetlands and riparian areas; 15) Trails; 16) Visual Quality Objectives; 17) Property ownership; 18) Right-of-ways, powerlines, etc.; 19) Sensitive areas such as natural areas, wilderness, etc.”

Response: The analysis contains sufficient information for the decision maker to make an informed decision without the use of graphics.

These attributes can be determined by the maps in Appendix A or on maps or data included in the Project File.

VARIOUS

80. An article in the June 1997 issue of Harpers Magazine titled “The Federal Chain-Saw Massacre” documents how the Forest Service does not act in the public interest. This article should be considered. The article Twilight, Ben W. and Fremont J. Lyden “MEASURING FOREST

SERVICE BIAS, Forestry and the Public Interest: Whose policies and values are represented by the USDA Forest Service managers?” Journal of Forestry, Vol. 87, No. 5, May 1989, documents how the Forest Service is biased in favor of logging. This article should be considered. The author (Twight) indicates that this is still the case today. The Inspector General’s Report, “Timber Sale Environmental Analysis Requirements” No. 08801-10-At January 1999 needs to be considered and addressed.

Response: See response to Scherübel comments #1 and 6 of May 18, 2001, in Appendix C.

EVEN-AGED MANAGEMENT

81. The Forest Service needs to fully develop and consider uneven-aged management alternatives. The 6th Circuit has ruled:

The National Forest Management Act mandates that the Service ensure that even-aged management practices be used in the national forests only when “consistent with the protection of soil, watershed, fish wildlife, recreation, and aesthetic resources, and the regeneration of timber resources.” 16 U.S.C. § 1604(g)(F)(v). The National Forest management Act thus contemplates that even-aged management techniques will be used only in exceptional circumstances. Yet, the defendants would utilize even-aged management logging as if it were the statutory rule, rather than the exception.

Sierra Club v. Thomas, 105 F.3d 248 (6th Cir. January 21, 1997).

Response: Alternative 3 includes a large area of uneven-aged management (p. 27 of the EA). See response to Scherübel comments #66 and 67 in Appendix C.

82. The Forest Service needs to consider true uneven-aged mangement (selection management). The Forest Service must not attempt to use “patch clear-cutting” in place of “group selection.” Group selection does not use area regulation, it uses diameter distribution regulation. The Forest Service also needs to consider the research done in Illinois on Group Selection. [Robinson, Scott “Effects of Selective Logging on Forest Birds In the Trail of Tears State Forest, Southern Illinois.”] The research identified group slection openings as “ecological traps.” Many species were attracted to the openings, which appeared to be suitable habitat. These species, however, did not successfully reproduce due to predation and cowbird parasitism. The study concluded, “If land is to be logged, single tree selection at low volumes removed (<20%) and long (15-20 years) cutting intervals is the method that will have the least adverse impact on forest bird communities.”

Response: See response to Scherübel comments #66 and 67 in Appendix C.

INDIANA BAT

83. The Federally Endangered Indiana bat needs to be considered. The analysis needs to consider all available research. The ESA requires the Forest Service to use "the best scientific and

commercial data available" to fulfill its Section 7 obligations. The analysis needs to consider the summer habitat required by female Indiana bats for maternity roosts (e.g., roost trees, protection from disturbance, and foraging habitat). The analysis also needs to consider the summer roosting and foraging needs of male Indiana bats. The analysis on roosts needs to consider existing and potential roosts in upland and riparian areas and the issues of bats using the trees while the sale is being cut (which would result in their death by killing them when their roost is cut or being killed by an adjacent tree falling on them), loyalty to the roost trees, stress of finding new roosts, and the impacts of removing trees next to roosts or potential roosts (i.e., making the tree more susceptible to windthrow and changing the thermal dynamics). The analysis also needs to consider the email message from Dr. John Whitaker that we sent to the Forest on September 6, 1999. The analysis also needs to consider the impact the logging will have on opening the area which allows other species of bats and birds to compete with the Indiana bat for the insects. Likewise, the analysis needs to consider the issue of additional predators that the Indiana bat will be exposed to as a result of opening the canopy. The analysis also needs to consider if there are any hibernacula in the area. If so, the analysis needs to consider the impacts of the sale on the bats' summer, fall, spring, and winter habitat. The Forest Service also needs to consider the rulings in *House v. United States Forest Service*, 974 F.Supp. 1022 (E.D.Ky. 1997) and *Bensman v. United States Forest Service*, 984 F.Supp. 1242 (W.D.Mo. (1997)). These rulings specifically rejected all the Forest Service's standard claims about why the logging will not have any adverse effects on the Indiana bat and ruled that the timber sales in question will "take" the Indiana bat.

*As a minimum these studies need to be addressed:

Callhan III, Edward, "Indiana bat Summer Habitat Requirements" Masters Thesis, University of Missouri, May 1993. (Callhan, 1993.)

Gardner, J.E., Garner, J.D., and Hoffmann, J.E. 1991 "Summer roost selection and roosting behavior of *Myotis sodalis* (Indiana bat) in Illinois.": Unpublished Report, Illinois Natural History Survey, Champaign, Illinois. (Gardner 1991)

Kiser, James D. and Charles L. Elliot "Foraging Habitat, Food Habits, and Roost Tree Characteristics of the Indiana Bat (*Myotis sodalis*) During Autumn in Jackson County, Kentucky."

Clawson, Richard L., "Report on the Status of Priority 1 Indiana bat Hibernacula, 1995."

Clawson, Richard L., "Indiana Bat Summer Habitat Patterns in Missouri" (Clawson 1996)

Kurta, Allen, and Kimberly Williams "Roosting Habitat, Microclimate, and Behavior of the Endangered Indiana Bat (*Myotis sodalis*) in Southern Michigan." Eastern Michigan University, October 1, 1992.

Rommé, Russell C., Karen Tyrel & Virgil Brack, Jr., "Literature Summary and Habitat Suitability Index Model, Components of Summer Habitat for the Indiana Bat, *Myotis sodalis*" March 20, 1995

Gardner, James E., Joyce Hofmann, and James D. Garner, "Summer Distribution

of the Federally Endangered Indiana Bat (*Myotis sodalis*) in Illinois” Transactions of the Illinois State Academy of Science (1996), Volume 89, 3 and 4, pp. 187-196.

Response: See pages 112 and 130-131 of the EA. See response to Scherübel comment #71 in Appendix C. Effects on Indiana bats are consistent with alternatives in the EA for the Threatened and Endangered Species Amendment for the Forest Plan and are covered under the Monongahela National Forest take permit.

The following comment was received April 15, 2003.

Don Gasper
Buchannon, WV

1. Commenter expresses concern about affects of disturbance on Desert Branch.

a. Brook trout

Response: Effects on fisheries, including brook trout are addressed in Fisheries section of the EA on pages 107-108 and on pages 114-118. The riparian mitigations (see EA pp. 26), which would be included in Alternatives 2, 3, 4, and 6 exceed the protection provided in Forest Plan Amendment 3 that provided for shade strip protection of trout streams.

b. Stream Flow

Response: Stream flows are addressed in the Watershed section of the Environmental Effects Chapter (pp. 69-87 of the EA). Effects on stream flows are expected to be minor and insignificant (EA pp. 77-78, 87).

c. Stream nutrient supply

Response: Uncut buffer areas along streams would be expected to minimize effects on streams. See p. 97-98 of the EA.

2. Commenter expresses concern that nutrient removal may result in not enough nutrients left to regrow a forest.

Response: Soil nutrients are addressed on pages 92 and 96-98 of the EA. Research has indicated some uncertainty about effects of timber harvesting on soil nutrients, but potential effects are mitigated by the intensity and dispersion of proposed harvest in the Desert Branch area. No significant adverse effects to soil nutrients would be expected under this proposal (EA, p. 98).

Also see response to Marshall comment #23 of June 30, 2002.